(FILE 'HOME' ENTERED AT 15:56:39 ON 25 JUN 2003)

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 15:56:50 ON 25 JUN 2003

```
L1          9328 S FLAGELLIN
L2        636310 S (KNOCK-OUT OR KNOCKOUT OR DELETION OR INSERTIONAL MUTANT OR I
L3         12164 S L2 AND SALMONELLA
L4           299 S L3 AND L1
L5           170 DUP REM L4 (129 DUPLICATES REMOVED)
L6            92 S L5 AND (VACCINA? OR IMMUNIZ? OR INJECT?)
L7        557584 S (ATTENUATED OR ATTENUATION)
L8        266023 S SALMONELLA
L9           672 S L1 AND L2
L10           77 S L9 AND L7
L11           52 S L10 AND L8
L12           39 S L11 AND (VACCINA? OR IMMUNIZ? OR INJECT?)
```

FILE 'AGRICOLA, LIFESCI, CONFSCI, BIOSIS, VETU, VETB, PHIN, PHIC' ENTERED AT 16:27:12 ON 25 JUN 2003

```
L13         2906 S FLAGELLIN
L14       159956 S (KNOCK-OUT OR KNOCKOUT OR DELETION OR INSERTIONAL MUTANT OR I
L15          134 S L13 AND L14
L16         7670 S TYPHI OR PARATYPHI
L17            4 S L16 AND L15
L18          436 S FLIC OR FLIB
L19           16 S L18 AND L16
L20            9 DUP REM L19 (7 DUPLICATES REMOVED)
L21        17871 S H1
L22           29 S L21 AND L16
L23            2 S L22 AND (VACCINA? OR IMMUNIZ? OR INJECT?)
L24          115 S L16 AND L14
L25           12 S L24 AND (VACCINA? OR IMMUNIZ? OR INJECT?)
L26            9 DUP REM L25 (3 DUPLICATES REMOVED)
L27            4 S L16 AND NONFLAGELLA?
```

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 16:45:08 ON 25 JUN 2003

FILE 'AGRICOLA, LIFESCI, CONFSCI, BIOSIS, VETU, VETB, PHIN, PHIC' ENTERED AT 16:45:10 ON 25 JUN 2003

FILE 'AGRICOLA, LIFESCI, CONFSCI, BIOSIS, VETU, VETB, PHIN, PHIC' ENTERED AT 16:45:25 ON 25 JUN 2003

```
L28           14 S L16 AND NONMOTILE
L29            9 DUP REM L28 (5 DUPLICATES REMOVED)
L30        34830 S L29 AND ATTENUATED OR ATTENUATION
L31            0 S L29 AND ATTEUAT?
L32            0 S L29 AND ATTENU?
L33         7670 S L16
L34          431 S FLIC
L35       159956 S L14
L36           11 S FLIB
L37            0 S L33 AND L34 AND L14
L38           16 S L33 AND L34
L39          115 S L33 AND L35
L40          115 S L39 AND L14
L41           79 DUP REM L40 (36 DUPLICATES REMOVED)
L42            2 S L41 AND FLAGELLIN
L43            0 S L16 AND NONMOTILE AND ATTENUATED
L44            2 S L16 AND NONMOTILE AND LIVE
L45            6 S TYPHI AND ATTENUATE
L46            4 DUP REM L45 (2 DUPLICATES REMOVED)
```

=>

```
(FILE 'HOME' ENTERED AT 15:56:39 ON 25 JUN 2003)

     FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH,
     USPATFULL, JAPIO' ENTERED AT 15:56:50 ON 25 JUN 2003
L1          9328 S FLAGELLIN
L2        636310 S (KNOCK-OUT OR KNOCKOUT OR DELETION OR INSERTIONAL MUTANT OR I
L3         12164 S L2 AND SALMONELLA
L4           299 S L3 AND L1
L5           170 DUP REM L4 (129 DUPLICATES REMOVED)
L6            92 S L5 AND (VACCINA? OR IMMUNIZ? OR INJECT?)

=>
```

6 ANSWER 1 OF 92 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AB Attenuated **Salmonella** typhimurium expressing foreign antigens elicit immune responses to both foreign and **Salmonella** antigens. To investigate the possibility of the modulation of immune responses to the Streptococcus pneumoniae PspA antigen by the antigen carrier **Salmonella** vaccines, we constructed various S. typhimurium vaccines with two questions in mind. First, how do different **Salmonella** attenuation types influence the immune response for the delivered foreign antigen? Two recombinant S. typhimurium vaccines, DELTAcrp-28 and DELTAphoP24, were constructed by the introduction of defined **deletion** mutations in the genes for cyclic AMP receptor protein (crp) and responder gene phoP of the PhoP/Q two-component-regulatory system. Second, how does surface adhesions on **Salmonella** vaccines affect immune responses to the delivered foreign antigen? Three S. typhimurium adhesin variants were constructed; a strain with **deletions** of both **flagellin** genes (DELTAfliC DELTAfljB), a type 1 fimbriae overproducing strain with DELTAfimW and a type 1 fimbriae defective strain (DELTAfimA DELTAfimH). These adhesin variants were attenuated by incorporation of the DELTAphoP24 mutation. After oral **immunization** in BALB/c mice with 109 CFU doses, the recombinant **Salmonella**-PspA vaccine strains stimulated IgG antibody responses to both the heterologous antigen PspA and its somatic antigens. The DELTAcrp vaccine induced IgG1 isotype dominant immune responses to the PspA antigen. In contrast, the DELTAphoP24 vaccine induced IgG2a isotype dominant responses. However, a booster **immunization** with the same vaccine stimulated the induction of significant levels of IgG1 isotype. The **flagellin** defective vaccine induced a similar IgG1/IgG2a ratio as in the flagellated vaccine. Interestingly, both DELTAfimW and DELTAfimA DELTAfimH vaccines induced IgG1 isotype dominant responses compared to the vaccine strain expressing wild-type type 1 fimbriae. The results shown in this study implicate that combination of the types of attenuation and variation of surface adhesins in **Salmonella** vaccines expressing foreign antigen can be used to modulate specific types of immune responses to a given antigen.

AN 2002:597036 BIOSIS

DN PREV200200597036

TI Variation of the PspA immune responses induced by live PspA-**Salmonella** vaccines carrying different types of attenuations and surface adhesions.

AU Kang, H. Y. (1); Lee, T. H. (1); Zhang, X. (1); Curtiss, R., III (1)

CS (1) Washington University, Saint Louis, MO USA

SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 197. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.

DT Conference

LA English

L6 ANSWER 2 OF 92 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AB To identify the major antigenic determinant of native **Salmonella** flagella of antigenic type d, we constructed a series of mutated fliC-d genes with **deletions** and amino acid alterations in hypervariable region IV and in regions of putative epitopes as suggested by epitope mapping with synthetic octameric peptides (T. M. Joys and F. Schodel, Infect. Immun. 59:3330-3332, 1991). The expressed product of most of the mutant genes, with **deletions** of up to 92 amino acids in region IV, assembled into functional flagella and conferred motility on **flagellin**-deficient hosts. Serological analysis of these flagella with different anti-d antibodies revealed that the peptide sequence centered at amino acids 229 to 230 of **flagellin** was a dominant

B-cell epitope at the surface of d flagella, because replacement of these two amino acids alone or together with their flanking sequence by a tripeptide specified by a linker sequence eliminated most reactivity with antisera against wild-type d flagella as tested by enzyme-linked immunosorbent assay or by Western immunoblot. Functional analysis of the mutated **flagellin** genes with or without an insert suggested that amino acids 180 to 214 in the 5' part of hypervariable region IV (residues 181 to 307 of the total of 505) is important to the function of flagella. The hybrid proteins formed by insertion of peptide sequence pre-S1 12-47 of hepatitis B virus surface antigen into the deleted **flagellins** assembled into functional flagella, and antibody to the pre-S1 sequence was detected after **immunization** of mice with the hybrid protein. This suggests that such mutant **flagellins** containing heterologous epitopes have potential as vaccines.

AN 1994:226104 BIOSIS
DN PREV199497239104
TI Hypervariable region IV of **Salmonella** gene fliC-d encodes a dominant surface epitope and a stabilizing factor for functional flagella.
AU He, Xiao-Song; Rivkina, Marianne; Stocker, Bruce A. D.; Robinson, William S. (1)
CS (1) Dep. Med., Stanford Univ. Sch. Med., Stanford, CA 94305 USA
SO Journal of Bacteriology, (1994) Vol. 176, No. 8, pp. 2406-2414. ISSN: 0021-9193.
DT Article
LA English

L6 ANSWER 3 OF 92 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB A synthetic 48-bp oligonucletide specifying the N-terminal 15 amino acids of M protein of Streptococcus pyogenes type 5 (plus a CTA codon, to terminate translation of genes with the insert in reverse orientation) was inserted by blunt-end ligation at the site of the 48-bp EcoRV **deletion** in the **Salmonella flagellin** gene in plasmid pLS408 (S. M. C. Newton, C. O. Jacob, and B. A. D. Stocker, Science 244:70-72, 1989). The resulting plasmid was transferred from Escherichia coli via a restriction-negative **Salmonella** typhimurium strain into an aromatic-compound-dependent, **flagellin** -negative live-vaccine strain of **Salmonella** dublin to produce strain SL7127, which was motile. Expression of the inserted epitope in **flagellin** and its exposure at the flagellar filament surface were shown by immunoblotting and by the reaction of flagellate bacteria (immobilization, immunogold labeling) with antibody raised by **injection** of the corresponding synthetic peptide, S-M5(1-15). Rabbits **immunized** by **injection** of the live-vaccine strain with flagella composed of the chimeric **flagellin** or by **injection** of concentrated flagella from such bacteria developed antibodies reactive in an enzyme-linked immunosorbent assay with peptide S-M5(1-15) and with the large peptic-digest peptide pepM5. These antibodies were opsonic for type 5 streptococci. Mice that were given parenteral live SL7127 (six doses, each 1 .times. 106 to 2 .times. 106, over 8 weeks) developed titers of ca. 12,800 for M5-specific peptides and opsonizing activity for type 5 streptococci but not for type 24 streptococci. Sera from mice similarly **immunized** with a control live vaccine strain without an insert in the **flagellin** gene did not react with the M5-specific antigens. All of the five mice given the control strain, without an insert, died after challenge with type 5 streptococci or type 24 streptococci; by contrast, four of the five mice given strain SL7127, with an insert, survived the M5 challenge, but none of the five challenged with the type 24 strain survived. Therefore, our study shows that an M protein epitope can be expressed in the context of an unrelated protein and maintain its immunogenicity. Furthermore, we demonstrate that mice can be protected against a Streptococcus pyogenes type 5 challenge by **immunization** with a **Salmonella** live vaccine with flagella made of **flagellin** with an insert carrying a protective epitope of M5 protein but without the cross-reactive

epitopes of the complete protein.
AN 1991:341594 BIOSIS
DN BA92:40969
TI EXPRESSION AND IMMUNOGENICITY OF A STREPTOCOCCAL M PROTEIN EPITOPE INSERTED IN **SALMONELLA FLAGELLIN**.
AU NEWTON S M C; KOTB M; POIRIER T P; STOCKER B A D; BEACHEY E H
CS DEP. MICROBIOL. IMMMUNOL., STANFORD UNIV. SCH. MED., STANFORD, CALIF. 94350.
SO INFECT IMMUN, (1991) 59 (6), 2158-2165.
CODEN: INFIBR. ISSN: 0019-9567.
FS BA; OLD
LA English

L6 ANSWER 4 OF 92 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Each of the two mutants isolated from a fliC (= hag, **flagellin** -deficient) Escherichia coli strain made motile by a plasmid carrying the fliC gene of **Salmonella** muenchen by selection for motility in the presence of anti-d (**Salmonella** flagellar antigen) serum had both lost and gained one or more subfactors of the wild-type antigen. In one mutant codon 246 was GAC (alanine) instead of GCC (asparagine); the other had a **deletion** of 105 base pairs, explicable by a 10 bp direct repeat, starting at bases 782 and 887. The in vitro removal of a 48 bp EcoRV(631)/EcoRV(679) fragment produced plasmid pLS408, which was found to lack a subfactor of wild-type antigen d but able to confer motility on **flagellin**-negative **Salmonella** sp. (and used for insertion of epitope-specifying oligonucleotides at its EcoRV site). Immunoblotting with absorbed and unabsorbed sera from rabbits **immunized** with E. coli with wild-type or mutated antigen d showed that the fusion proteins specified by .lambda. gt11 with the N-terminal part of gene lacZ joined to a restriction fragment coding for residues 145-391 of **flagellin** gave the same pattern of parent-specific and mutant-specific reactions as the flagellate bacteria. Four out of five similarly selected mutants had the same 105bp **deletion** as the first-isolated mutant; the fifth had a 72bp **deletion** made possible by a 7-base pair direct repeat, starting at positions 649 and 721. All these changes in serological character without loss of function affected segment IV, specifying residues 182 to 308 of the total of 505, where there is little homology between different flagellar-antigen alleles.
AN 1991:226828 BIOSIS
DN BA91:118288
TI SEGMENT IV OF A **SALMONELLA FLAGELLIN** GENE SPECIFIES FLAGELLAR ANTIGEN EPITOPES.
AU NEWTON S M C; WASLEY R D; WILSON A; ROSENBERG L T; MILLER J F; STOCKER B A D
CS DEP. MICROBIOL. AND IMMUNOL., STANFORD UNIV. SCH. MED., STANFORD, CALIF. 94305-5402.
SO MOL MICROBIOL, (1991) 5 (2), 419-426.
CODEN: MOMIEE. ISSN: 0950-382X.
FS BA; OLD
LA English

L6 ANSWER 5 OF 92 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB A nonapeptide from IL-1.beta. has been reported to be an immunostimulant and adjuvant. To investigate the possibility of enhancing the immunogenicity of recombinant antigens delivered by live-attenuated **Salmonella** strains, we inserted an oligonucleotide coding for the non-apeptide from murine IL-1.beta. into the genes of three model proteins: LamB, MalE, and **flagellin**. The hybrid proteins were expressed and delivered in vivo by **Salmonella** aroA strains, and serum antibody responses were analyzed. The results showed that the nonapeptide induced an increase in the immune response against **Salmonella**- delivered **flagellin**, measured on day 28 post-**immunization**. However, the adjuvant effect was lost by day

42. In no case was an adjuvant effect detected for **Salmonella** -delivered Lamb or MalE. Thus, by comparing the immune responses raised by purified Male with and without the peptide, we investigated whether the insertion of the peptide affected the immunogenicity of the protein itself. Also in this case, a modest adjuvant effect was shown only after primary **immunization** and when very low doses of antigen were used. In conclusion, the immunomodulatory properties of the IL-1.beta. peptide can also be detected when it is delivered in vivo by **Salmonella**; however, the effect is modest and antigen-dependent.

AN 1998077817 EMBASE
TI Effects of the insertion of a nonapeptide from murine IL-1.beta. on the immunogenicity of carrier proteins delivered by live attenuated **Salmonella**.
AU Chen I.; Pizza M.; Rappuoli R.; Newton S.M.C.
CS R. Rappuoli, IRIS, Chiron Vacc. Immunobiol. Res. Inst., Via Fiorentina 1, I-53100 Siena, Italy. rappuoli@iris02.biocine.it
SO Archives of Microbiology, (1998) 169/2 (113-119).
Refs: 32
ISSN: 0302-8933 CODEN: AMICCW
CY Germany
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L6 ANSWER 6 OF 92 MEDLINE
AB Plasmid pLS408 includes gene fliC(d) specifying **Salmonella flagellin** of antigenic type d with an in vitro **deletion** of a 48 base-pair EcoRV fragment in its central hypervariable antigenically-determinant region IV. Oligonucleotides specifying peptide epitopes of antigens of unrelated pathogens inserted, in correct orientation, at the unique EcoRV site of pLS408 specify chimeric **flagellins** and, in many instances, cause production of functional flagella when the plasmid is placed in a **flagellin**-deficient delta aroA live-vaccine strain of **Salmonella** dublin. The foreign epitope is then exposed at the surface of the flagellar filaments, as shown by the immobilizing effect of anti-epitope antibody and by immunogold electron-microscopy. The live-vaccine strain with a foreign epitope at the surface of its flagella when administered to mice by **injection** nearly always causes production of antibody with affinity for the foreign epitope and, sometimes, also for the source protein. Repeated **injection** of the live vaccine with an epitope of Streptococcus pyogenes type 5 M protein as insert caused production of opsonizing antibody and conferred partial protection against Streptococcus challenge. **Injection** of semi-purified chimeric flagella or **flagellin**, alone or with adjuvant, likewise causes antibody production, in one instance sufficient to give partial protection against influenza A virus challenge. Plasmid pLS408 with some inserts does not confer motility, either because the filaments produced are non-functional or because **flagellin** is made but not assembled or because little or no **flagellin** is produced. The features of a sequence which as insert determine production or non-production of functional flagella are not known. The effect of insertion of known T-cell epitopes and cellular immune responses to epitope inserts in **flagellin** are as yet little explored.

AN 94321840 MEDLINE
DN 94321840 PubMed ID: 7519231
TI Immune responses to epitopes inserted in **Salmonella flagellin**.
AU Stocker B A; Newton S M
CS Department of Microbiology and Immunology, Stanford University School of Medicine, CA 94305-5402.
SO INTERNATIONAL REVIEWS OF IMMUNOLOGY, (1994) 11 (2) 167-78. Ref: 24
Journal code: 8712260. ISSN: 0883-0185.

CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199408
ED Entered STN: 19940909
Last Updated on STN: 19960129
Entered Medline: 19940830

L6 ANSWER 7 OF 92 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB To investigate the involvement of RpoN in flagellum production and pathogenicity of Vibrio (Listonella) anguillarum, the rpoN gene was cloned and sequenced. The deduced product of the rpoN gene displayed strong homology to the alternative sigma(54) factor (RpoN) of numerous species of bacteria. In addition, partial sequencing of rpoN-linked ORFs revealed a marked resemblance to similarly located ORFs in other bacterial species. A polar insertion or an in-frame **deletion** in the coding region of rpoN abolished expression of the **flagellin** subunits and resulted in loss of motility. Introduction of the rpoN gene of V. anguillarum or Pseudomonas putida into the rpoN mutants restored flagellation and motility. The rpoN mutants were proficient in the expression of other proposed virulence determinants of V. anguillarum, such as ability to grow under low available iron conditions, and expression of the LPS O-antigen and of haemolytic and proteolytic extracellular products. The infectivity of the rpoN mutants with respect to the wild-type strain was unaffected following intraperitoneal **injection** of fish but was reduced significantly when fish were immersed in bacteria-containing water. Thus, RpoN does not appear to regulate any factors required for virulence subsequent to penetration of the fish epithelium, but is important in the infection of fish by water-borne V. anguillarum.
AN 1998:24541 SCISEARCH
GA The Genuine Article (R) Number: YM496
TI RpoN of the fish pathogen Vibrio (Listonella) anguillarum is essential for flagellum production and virulence by the water-borne but not intraperitoneal route of inoculation
AU OToole R (Reprint); Milton D L; Horstedt P; WolfWatz H
CS UMEA UNIV, DEPT CELL & MOL BIOL, S-90187 UMEA, SWEDEN (Reprint); UMEA UNIV, DEPT PATHOL, S-90187 UMEA, SWEDEN
CYA SWEDEN
SO MICROBIOLOGY-UK, (DEC 1997) Vol. 143, Part 12, pp. 3849-3859.
Publisher: SOC GENERAL MICROBIOLOGY, MARLBOROUGH HOUSE, BASINGSTOKE RD, SPENCERS WOODS, READING, BERKS, ENGLAND RG7 1AE.
ISSN: 1350-0872.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 50
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 8 OF 92 USPATFULL
AB The invention provides isolated polypeptide and nucleic acid sequences derived Enterococcus faecium that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.
AN 2003:169096 USPATFULL
TI Nucleic acid sequences and expression system relating to Enterococcus faecium for diagnostics and therapeutics
IN Doucette-Stamm, Lynn A., Framingham, MA, United States
Bush, David, Somerville, MA, United States
PA Genome Therapeutics Corporation, Waltham, MA, United States (U.S.

corporation)
PI US 6583275 B1 20030624
AI US 1998-107532 19980630 (9)
PRAI US 1998-85598P 19980514 (60)
US 1997-51571P 19970702 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Marschel, Ardin H.
LREP Genome Therapeutics Corporation
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 15265

L6 ANSWER 9 OF 92 USPATFULL
AB The present invention relates to methods for the modulation of biofilm formation and antibiotic resistance. Specifically, the present invention identifies the differential expression of biofilm-associated genes in biofilms, relative to their expression in non-biofilm producing bacterial cells. The present invention also identifies the differential expression of biofilm-associated genes in biofilms treated with antibiotic, relative to their expression in untreated biofilms. The present invention describes methods for the diagnostic evaluation of biofilm formation. The invention also provides methods for identifying a compound capable of modulating biofilm formation and antibiotic resistance. The present invention also provides methods for the identification and therapeutic use of compounds as treatments of biofilm-associated diseases or disorders.
AN 2003:165887 USPATFULL
TI Methods and compositions for the modulation of biofilm formation
IN Whiteley, Marvin, Coralville, IA, UNITED STATES
Bangera, M. Gita, Lynnwood, WA, UNITED STATES
Lory, Stephen, Cambridge, MA, UNITED STATES
Greenberg, Everett Peter, Iowa City, IA, UNITED STATES
PA University of Iowa Research Foundation, Iowa City, IA, UNITED STATES, 52242 (U.S. corporation)
PI US 2003113742 A1 20030619
AI US 2002-127032 A1 20020419 (10)
PRAI US 2001-285190P 20010420 (60)
US 2001-344142P 20011024 (60)
DT Utility
FS APPLICATION
LREP LAHIVE & COCKFIELD, 28 STATE STREET, BOSTON, MA, 02109
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 7123

L6 ANSWER 10 OF 92 USPATFULL
AB The invention relates to the finding that virus like particles (VLPs) can be loaded with immunostimulatory substances, in particular with DNA oligonucleotides containing non-methylated C and G (CpGs). Such CpG-VLPs are dramatically more immunogenic than their CpG-free counterparts and induce enhanced B and T cell responses. The immune response against antigens optionally coupled, fused or attached otherwise to the VLPs is similarly enhanced as the immune response against the VLP itself. In addition, the T cell responses against both the VLPs and antigens are especially directed to the Th1 type. Antigens attached to CpG-loaded VLPs may therefore be ideal vaccines for prophylactic or therapeutic **vaccination** against allergies, tumors and other self-molecules and chronic viral diseases.
AN 2003:145924 USPATFULL
TI Packaging of immunostimulatory substances into virus-like particles: method of preparation and use

IN Bachmann, Martin, Winterthur, SWITZERLAND
Storni, Tazio, Viganello, SWITZERLAND
Maurer, Patrik, Winterthur, SWITZERLAND
Tissot, Alain, Zurich, SWITZERLAND
Schwarz, Katrin, Schlieren, SWITZERLAND
Meijerink, Edwin, Zurich, SWITZERLAND
Lipowsky, Gerd, Zurich, SWITZERLAND
Pumpens, Paul, Riga, LATVIA
Cielens, Indulis, Riga, LATVIA
Renhofa, Regina, Riga, LATVIA
PA Cytos Biotechnology AG (non-U.S. corporation)
PI US 2003099668 A1 20030529
AI US 2002-244065 A1 20020916 (10)
PRAI US 2001-318994P 20010914 (60)
US 2002-374145P 20020422 (60)
DT Utility
FS APPLICATION
LREP STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934
CLMN Number of Claims: 207
ECL Exemplary Claim: 1
DRWN 60 Drawing Page(s)
LN.CNT 7907
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 11 OF 92 USPATFULL
AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the detection of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.
AN 2003:134814 USPATFULL
TI VMP-like sequences of pathogenic Borrelia
IN Norris, Steven J., Houston, TX, UNITED STATES
Zhang, Jing-Ren, Delmar, NY, UNITED STATES
Hardham, John M., Gales Ferry, CT, UNITED STATES
Howell, Jerrilyn K., Houston, TX, UNITED STATES
Barbour, Alan G., Newport Beach, CA, UNITED STATES
Weinstock, George M., Houston, TX, UNITED STATES
PA Board of Regents, The University of Texas System (U.S. corporation)
PI US 2003092903 A1 20030515
AI US 2002-143024 A1 20020731 (10)
RLI Division of Ser. No. US 1999-125619, filed on 27 Jan 1999, GRANTED, Pat. No. US 6437116 Continuation of Ser. No. WO 1997-US2952, filed on 20 Feb 1997, PENDING
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS APPLICATION
LREP Mark B. Wilson, FULBRIGHT & JAWORSKI L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX, 78701
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 5170
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 12 OF 92 USPATFULL
AB The invention relates to the finding that stimulation of antigen presenting cell (APC) activation using substances such as anti-CD40

antibodies or DNA oligomers rich in non-methylated C and G (CpGs) can dramatically enhance the specific T cell response obtained after **vaccination** with recombinant virus like particles (VLPs) coupled, fused or otherwise attached to antigens. While **vaccination** with recombinant VLPs fused to a cytotoxic T cell (CTL) epitope of lymphocytic choriomeningitis virus induced low levels cytolytic activity only and did not induce efficient anti-viral protection, VLPs **injected** together with anti-CD40 antibodies or CpGs induced strong CTL activity and full anti-viral protection. Thus, stimulation of APC-activation through antigen presenting cell activators such as anti-CD40 antibodies or CpGs can exhibit a potent adjuvant effect for **vaccination** with VLPs coupled, fused or attached otherwise to antigens.

AN 2003:133508 USPATFULL
TI In vivo activation of antigen presenting cells for enhancement of immune responses induced by virus like particles
IN Bachmann, Martin F., Winterthur, SWITZERLAND
Lechner, Franziska, Zurich, SWITZERLAND
Storni, Tazio, Viganello, SWITZERLAND
PA Cytos Biotechnology AG (non-U.S. corporation)
PI US 2003091593 A1 20030515
AI US 2002-243739 A1 20020916 (10)
PRAI US 2001-318967P 20010914 (60)
DT Utility
FS APPLICATION
LREP STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934
CLMN Number of Claims: 194
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 6522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 13 OF 92 USPATFULL
AB The invention provides isolated polypeptide and nucleic acid sequences derived from Acinetobacter mirabilis that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.
AN 2003:130010 USPATFULL
TI Nucleic acid and amino acid sequences relating to Acinetobacter baumannii for diagnostics and therapeutics
IN Breton, Gary, Marlborough, MA, United States
Bush, David, Somerville, MA, United States
PA Genome Therapeutics Corporation, Waltham, MA, United States (U.S. corporation)
PI US 6562958 B1 20030513
AI US 1999-328352 19990604 (9)
PRAI US 1998-88701P 19980609 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Borin, Michael
LREP Genome Therapeutics Corporation
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 16618
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 14 OF 92 USPATFULL
AB The invention relates to a pharmaceutical composition comprising a chimeric, folded protein domain comprising two or more sequence segments from parent amino acid sequences that are not homologous. The invention

more particularly relates to compositions comprising a chimeric, folded protein domain comprising two or more sequence segments wherein each of the sequence segments: is not designed or selected to consist solely of a single complete protein structural element and is not designed or selected to consist solely of an entire protein domain; and, in isolation, shows no significant folding at the melting temperature of the chimeric protein. The invention also relates to methods for the selection of such protein domains, and to methods of raising an immune response using such domains, and preferably to chimeric domains that display conformational B cell epitopes of at least one of their parent amino acid sequences.

AN 2003:113451 USPATFULL
TI Combinatorial protein domains
IN Winter, Gregory Paul, Cambridge, UNITED KINGDOM
Riechmann, Lutz, Cambridge, UNITED KINGDOM
PI US 2003078192 A1 20030424
AI US 2002-119556 A1 20020410 (10)
RLI Continuation-in-part of Ser. No. US 2001-938945, filed on 24 Aug 2001, PENDING Continuation-in-part of Ser. No. WO 2001-GB445, filed on 2 Feb 2001, UNKNOWN
PRAI GB 2000-2492 20000203
GB 2000-19362 20000807
GB 2000-16346 20000703
US
DT Utility
FS APPLICATION
LREP PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199
CLMN Number of Claims: 79
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 4574
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 15 OF 92 USPATFULL
AB The invention provides isolated polypeptide and nucleic acid sequences derived from Pseudomonas aeruginosa that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.
AN 2003:108972 USPATFULL
TI Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics
IN Rubenfield, Marc J., Framingham, MA, United States
Nolling, Jork, Ouincy, MA, United States
Deloughery, Craig, Medford, MA, United States
Bush, David, Somerville, MA, United States
PA Genome Therapeutics Corporation, Waltham, MA, United States (U.S. corporation)
PI US 6551795 B1 20030422
AI US 1999-252991 19990218 (9)
PRAI US 1998-74788P 19980218 (60)
US 1998-94190P 19980727 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Allen, Marianne P.
LREP Burns, Doane, Swecker & Mathis, L.L.P.
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 21431
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 16 OF 92 USPATFULL
AB The invention provides Helicobacter polypeptides that can be used in **vaccination** methods for preventing or treating Helicobacter infection, and polynucleotides that encode these polypeptides.
AN 2003:100293 USPATFULL
TI Helicobacter antigens and corresponding DNA fragments
IN Haas, Rainer, Tuebingen, GERMANY, FEDERAL REPUBLIC OF
Kleanthous, Harold, Newtonville, MA, UNITED STATES
Meyer, Thomas F., Tuebingen, GERMANY, FEDERAL REPUBLIC OF
Odenbreit, Stefan, Ammerbuch, GERMANY, FEDERAL REPUBLIC OF
Al-Garawi, Amal A., Boston, MA, UNITED STATES
Miller, Charles A., Medford, MA, UNITED STATES
PI US 2003069404 A1 20030410
AI US 2001-13315 A1 20011105 (10)
RLI Continuation of Ser. No. US 1996-749051, filed on 14 Nov 1996, ABANDONED
DT Utility
FS APPLICATION
LREP CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 42 Drawing Page(s)
LN.CNT 4832
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 17 OF 92 USPATFULL
AB Disclosed herein methods for producing live attenuated **Salmonella** typhi, **Salmonella** paratyphi A and B and other **Salmonella** mutants which can be used in vaccines to prevent diseases caused by **Salmonella** infection. These mutants can also be used to prevent or treat diseases caused by other bacterial strains, by viral and parasitic pathogens and by tumor cells.
AN 2003:99224 USPATFULL
TI Live attenuated **salmonella** strains for producing monovalent or multivalent vaccines
IN Vladoianu, Ion R., Cologny, SWITZERLAND
Berdoz, Jose A., Chernex, SWITZERLAND
PI US 2003068328 A1 20030410
AI US 2001-11960 A1 20011105 (10)
PRAI US 2001-327472P 20011004 (60)
DT Utility
FS APPLICATION
LREP MINTZ, LEVIN, COHN, FERRIS, GLOVSKY and POPEO, P.C, One Financial Center, Boston, MA, 02111
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 18 OF 92 USPATFULL
AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the detection of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.
AN 2003:87010 USPATFULL
TI VMP-like sequences of pathogenic Borrelia
IN Norris, Steven J., Houston, TX, UNITED STATES
Zhang, Jing-Ren, Delmar, NY, UNITED STATES

Hardham, John M., Gales Ferry, CT, UNITED STATES
Howell, Jerrilyn K., Houston, TX, UNITED STATES
Barbour, Alan G., Newport Beach, CA, UNITED STATES
Weinstock, George M., Houston, TX, UNITED STATES
PA Board of Regents, The University of Texas System (U.S. corporation)
PI US 2003060618 A1 20030327
AI US 2002-222162 A1 20020816 (10)
RLI Division of Ser. No. US 1999-125619, filed on 27 Jan 1999, GRANTED, Pat. No. US 6437116 Continuation of Ser. No. WO 1997-US2952, filed on 20 Feb 1997, PENDING
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS APPLICATION
LREP Thomas M. Boyce, Esq., FULBRIGHT & JAWORSKI L.L.P., 600 Congress Avenue, Suite 2400, Austin, TX, 78701
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 5175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 19 OF 92 USPATFULL
AB The present invention provides polynucleotide sequences of the genome of Staphylococcus aureus, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and assays and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use.
AN 2003:78516 USPATFULL
TI STAPHYLOCOCCUS AUREUS POLYNUCLEOTIDES AND SEQUENCES
IN KUNSCH, CHARLES A., GAITHERSBURG, MD, UNITED STATES
CHOI, GIL A., ROCKVILLE, MD, UNITED STATES
BARASH, STEVEN C., ROCKVILLE, MD, UNITED STATES
DILLON, PATRICK J., GAITHERSBURG, MD, UNITED STATES
FANNON, MICHAEL R., SILVER SPRING, MD, UNITED STATES
ROSEN, CRAIG A., LAYTONSVILLE, MD, UNITED STATES
PI US 2003054436 A1 20030320
AI US 1997-781986 A1 19970103 (8)
PRAI US 1996-9861P 19960105 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 13414
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 20 OF 92 USPATFULL
AB The invention provides an immunomodulatory **flagellin** peptide having at least about 10 amino acids of substantially the amino acid sequence GAVQNRFNSAIT, or a modification thereof, and having toll-like receptor 5 (TLR5) binding. Methods of inducing an immune response are also provided.
AN 2003:64309 USPATFULL
TI Toll-like receptor 5 ligands and methods of use
IN Aderem, Alan, Seattle, WA, UNITED STATES
Hayashi, Fumitaka, North Quincy, MA, UNITED STATES
Smith, Kelly D., Seattle, WA, UNITED STATES
Underhill, David M., Seattle, WA, UNITED STATES
Ozinsky, Adrian, Seattle, WA, UNITED STATES
PI US 2003044429 A1 20030306

AI US 2002-125692 A1 20020417 (10)
PRAI US 2001-285477P 20010420 (60)
DT Utility
FS APPLICATION
LREP CATHRYN CAMPBELL, CAMPBELL & FLORES LLP, 7th Floor, 4370 La Jolla Village Drive, San Diego, CA, 92122
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 15 Drawing Page(s)
LN.CNT 4238
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 21 OF 92 USPATFULL
AB The invention relates to methods of selecting proteins, out of large libraries, having desirable characteristics. Exemplified are methods of expressing enzymes and antibodies on the surface of host cells and selecting for desired activities. These methods have the advantage of speed and ease of operation when compared with current methods. They also provide, without additional cloning, a source of significant quantities of the protein of interest.
AN 2003:51135 USPATFULL
TI Directed evolution of enzymes and antibodies
IN Iverson, Brent, Austin, TX, UNITED STATES
Georgiou, George, Austin, TX, UNITED STATES
Chen, Gang, Austin, TX, UNITED STATES
Olsen, Mark J., Austin, TX, UNITED STATES
Daugherty, Patrick S., Austin, TX, UNITED STATES
PA Board of Regents, The University of Texas System (U.S. corporation)
PI US 2003036092 A1 20030220
AI US 2001-782672 A1 20010212 (9)
RLI Continuation of Ser. No. US 1997-847063, filed on 1 May 1997, ABANDONED Continuation-in-part of Ser. No. US 1995-447402, filed on 23 May 1995, GRANTED, Pat. No. US 5866344 Continuation-in-part of Ser. No. US 1994-258543, filed on 10 Jun 1994, ABANDONED Division of Ser. No. US 1991-794731, filed on 15 Nov 1991, GRANTED, Pat. No. US 5348867
DT Utility
FS APPLICATION
LREP Steven L. Highlander, Esq., FULBRIGHT & JAWORSKI L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX, 78701
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 3955
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 22 OF 92 USPATFULL
AB Fusion of the viral envelope, or infected cell membranes with uninfected cell membranes, is an essential step in the viral life cycle. Recent studies involving the human immunodeficiency virus type 1(HIV-1) demonstrated that synthetic peptides (designated DP-107 and DP-178) derived from potential helical regions of the transmembrane (TM) protein, gp41, were potent inhibitors of viral fusion and infection. A computerized antiviral searching technology (C.A.S.T.) that detects related structural motifs (e.g., ALLMOTI 5, 107.times.178.times.4, and PLZIP) in other viral proteins was employed to identify similar regions in the Epstein-Barr virus (EBV). Several conserved heptad repeat domains that are predicted to form coiled-coil structures with antiviral activity were identified in the EBV genome. Synthetic peptides of 16 to 39 amino acids derived from these regions were prepared and their antiviral activities assessed in a suitable in vitro screening assay. These peptides proved to be potent inhibitors of EBV fusion. Based upon their structural and functional equivalence to the known HIV-1 inhibitors DP-107 and DP-178, these peptides should provide a novel approach to the development of targeted therapies for the treatment of

EBV infections.
AN 2003:40533 USPATFULL
TI Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission
IN Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6518013 B1 20030211
AI US 1995-485546 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS GRANTED
EXNAM Primary Examiner: Scheiner, Laurie; Assistant Examiner: Parkin, Jeffrey S.
LREP Pennie & Edmonds LLP, Nelson, M. Bud
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 24700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 23 OF 92 USPATFULL
AB The invention provides Helicobacter polypeptides that can be used in **vaccination** methods for preventing or treating Helicobacter infection, and polynucleotides that encode these polypeptides.
AN 2003:31115 USPATFULL
TI HELICOBACTER POLYPEPTIDES AND CORRESPONDING POLYNUCLEOTIDE MOLECULES
IN HAAS, RAINER, TUEBINGEN, GERMANY, FEDERAL REPUBLIC OF
KLEANTHOUS, HAROLD, NEWTONVILLE, MA, UNITED STATES
TOMB, JEAN-FRANCOIS, BALTIMORE, MD, UNITED STATES
MILLER, CHARLES, MEDFORD, MA, UNITED STATES
AL-GARAWI, AMAL, BOSTON, MA, UNITED STATES
ODENBREIT, STEFAN, AMMERBUCH, GERMANY, FEDERAL REPUBLIC OF
MEYER, THOMAS, TUEBINGEN, GERMANY, FEDERAL REPUBLIC OF
PI US 2003023066 A1 20030130
AI US 1997-834705 A1 19970401 (8)
RLI Continuation-in-part of Ser. No. US 1996-749051, filed on 14 Nov 1996, ABANDONED
DT Utility
FS APPLICATION
LREP PAUL T CLARK, CLARK AND ELBING, 176 FEDERAL STREET, BOSTON, MA, 021102223
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 4253
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 24 OF 92 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a

multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.

AN 2003:20023 USPATFULL
TI 66 KDA antigen from Borrelia
IN Bergstrom, Sven, Umea, SWEDEN
Barbour, Alan George, Newport Beach, CA, United States
PA Symbicom Aktiebolog, Molndal, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6509017 B1 20030121
AI US 1995-470638 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994, now patented, Pat. No. US 6054296 Continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 Continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned Continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
PRAI DK 1919-590288 19191024
DT Utility
FS GRANTED
EXNAM Primary Examiner: Navarro, Mark; Assistant Examiner: Hines, Jana
LREP Frommer Lawrence & Haug, LLP, Frommer, William S., Kowalski, Thomas J.
CLMN Number of Claims: 43
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3305
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 25 OF 92 USPATFULL
AB The present application describes selected polynucleotide sequence from the 1.66-megabase pair genome sequence of an autotrophic archaeon, Methanococcus jannaschii, and its 58- and 16-kilobase pair extrachromosomal elements.

AN 2003:6806 USPATFULL
TI Selected polynucleotide and polypeptide sequences of the methanogenic archaeon, methanococcus jannashii
IN Bult, Carol J., Bar Harbor, ME, United States
White, Owen R., Gaithersburg, MD, United States
Smith, Hamilton O., Baltimore, MD, United States
Woese, Carl R., Urbana, IL, United States
Venter, J. Craig, Rockville, MD, United States
PA The Board of Trustees of the University of Illinois, Urbana, IL, United States (U.S. corporation)
The Institute for Genomic Research, Rockville, MD, United States (U.S. corporation)
Johns Hopkins University, Baltimore, MD, United States (U.S. corporation)
PI US 6503729 B1 20030107
AI US 1997-916421 19970822 (8)
PRAI US 1996-24428P 19960822 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Schnizer, Richard
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 107
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 4244
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 26 OF 92 USPATFULL
AB Disclosed are polypeptides named HP1122, Cj1464 and PA3351 which are the anti-.sigma..sup.28 factor of Helicobacter pylori, Campylobacter jejuni and Pseudomonas aeruginosa, respectively and fragments and variants thereof. Also disclosed is a polypeptide named SID1122 which is the domain of Helicobacter pylori's HP1122 polypeptide involved in a

specific interaction with Helicobacter pylori .sigma..sup.28 (HP1032) and which has an anti-.sigma..sup.28 factor activity. Further disclosed are a SID1122 polypeptide that interacts with HP1032, identification of the HP1032 interacting domain (SID1032) that is specifically involved in the interaction with HP1122, complexes of two polypeptides such as HP1122-HP1032, or SID1122-SID1032, fragments and variants of the SID1122 and SID1032 polypeptides, antibodies to the SID1122 and SID1032 polypeptides, methods for screening drugs or agents which modulate the interaction of Helicobacter pylori's polypeptides encoded by HP1122 and HP1032, and pharmaceutical compositions for treating or preventing Gram negative flagellated bacteria infection in a human or mammal, more specifically Helicobacter sp. or Campylobacter jejuni or Pseudomonas aeruginosa infection, in particular Helicobacter pylori infection in a human or a mammal.

AN 2002:337436 USPATFULL
TI Anti-sigma28 factors in Helicobacter pylori, Campylobacter jejuni and Pseudomonas aeruginosa and applications thereof
IN Legrain, Pierre, Paris, FRANCE
Colland, Frederic, Fosses, FRANCE
Rain, Jean-Christophe, Puteaux, FRANCE
Labigne, Agnes, Bures-sur-yvette, FRANCE
De Reuse, Hilde, Paris, FRANCE
PI US 2002192796 A1 20021219
AI US 2002-66127 A1 20020131 (10)
PRAI US 2001-265465P 20010131 (60)
DT Utility
FS APPLICATION
LREP LERNER, DAVID, LITTENBERG,, KRUMHOLZ & MENTLIK, 600 SOUTH AVENUE WEST, WESTFIELD, NJ, 07090
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1686
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 27 OF 92 USPATFULL
AB Conjugate molecules which include photosensitizer compositions conjugated to non-antibody non-affinity pair targeting moieties and methods of making and using such conjugates are described.
AN 2002:323079 USPATFULL
TI Photosensitizer conjugates for pathogen targeting
IN Hasan, Tayyaba, Arlington, MA, UNITED STATES
Hamblin, Michael R., Revere, MA, UNITED STATES
Soukos, Nikos, Revere, MA, UNITED STATES
PI US 2002183245 A1 20021205
AI US 2002-143593 A1 20020509 (10)
RLI Division of Ser. No. US 1997-812606, filed on 6 Mar 1997, PENDING
DT Utility
FS APPLICATION
LREP FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY, 10151
CLMN Number of Claims: 56
ECL Exemplary Claim: 1
DRWN 11 Drawing Page(s)
LN.CNT 2695
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 28 OF 92 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method that combines variegated peptide display libraries, e.g., in a "display mode", with soluble secreted peptide libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of peptides having a desired biological activity.
AN 2002:307817 USPATFULL
TI Methods and reagents for isolating biologically active peptides

IN Gyuris, Jeno, Winchester, MA, UNITED STATES
Morris, Aaron J., Boston, MA, UNITED STATES
PI US 2002172940 A1 20021121
AI US 2002-80854 A1 20020222 (10)
RLI Continuation of Ser. No. US 1998-174943, filed on 19 Oct 1998, GRANTED, Pat. No. US 6420110
DT Utility
FS APPLICATION
LREP ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
CLMN Number of Claims: 79
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 3210
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 29 OF 92 USPATFULL
AB The present invention relates to peptides which exhibit potent anti-viral activity. In particular, the invention relates to methods of using such peptides as inhibitory of respiratory syncytial virus ("RSV") transmission to uninfected cells. The peptides used in the methods of the invention are homologs of the DP-178 and DP-107 peptides, peptides corresponding to amino acid residues 638 to 673, and to amino acid residues 558 to 595, respectively, of the HIV-1.sub.LAI transmembrane protein (TM) gp41.
AN 2002:297296 USPATFULL
TI Methods for inhibition of membrane fusion-associated events, including respiratory syncytial virus transmission
IN Bolognesi, Dani Paul, Durham, NC, United States
Matthews, Thomas James, Durham, NC, United States
Wild, Carl T., Durham, NC, United States
Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
Langlois, Alphonse J., Durham, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6479055 B1 20021112
AI US 1995-470896 19950606 (8)
RLI Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS GRANTED
EXNAM Primary Examiner: Stucker, Jeffrey
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 44
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 26553
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 30 OF 92 USPATFULL
AB The present application relates to nucleotide sequences which regulate the biosynthesis of the flagella proteins Helicobacter pylori, to the proteins encoded by these sequences and to aflagellate bacterial strains. The invention also relates to the use of these means for detecting an infection due to H . pylori or for protecting against such an infection.
AN 2002:291079 USPATFULL
TI Cloning and characterization of FLBA gene of H. pylori production of aflagellate
IN Suerbaum, Sebastian, Bochum, GERMANY, FEDERAL REPUBLIC OF
Labigne, Agnes, Bures sur Yvette, FRANCE
PA Institut Pasteur, Paris, FRANCE (non-U.S. corporation)

Institut National de la Sante et de la Recherche Medicale, Paris, FRANCE (non-U.S. corporation)
PI US 6476213 B1 20021105
AI US 1996-671757 19960628 (8)
PRAI FR 1995-8508068 19950704
DT Utility
FS GRANTED
EXNAM Primary Examiner: Kunz, Gary L.; Assistant Examiner: Gucker, Stephen
LREP Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 22 Drawing Figure(s); 22 Drawing Page(s)
LN.CNT 2013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 31 OF 92 USPATFULL
AB Conjugate molecules which include photosensitizer compositions conjugated to non-antibody non-affinity pair targeting moieties and methods of making and using such conjugates are described.
AN 2002:262378 USPATFULL
TI Photosensitizer conjugates for pathogen targeting
IN Hasan, Tayyaba, Arlington, MA, United States
Hamblin, Michael R., Revere, MA, United States
Soukos, Nikos, Revere, MA, United States
PA The General Hospital Corporation, Boston, MA, United States (U.S. corporation)
PI US 6462070 B1 20021008
AI US 1997-812606 19970306 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Travers, Russell
LREP Frommer Lawrence & Haug LLP, Kowalski, Thomas J., Leahy, Amy
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 2666
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 32 OF 92 USPATFULL
AB A method of producing pili and vaccines containing pili are described using bacteria that express at least one immunogenic peptide in a PapA region that does not normally contain such a peptide.
AN 2002:258441 USPATFULL
TI Immunogenic pili presenting foreign peptides, their production and use
IN O'Hanley, Peter, Washington, DC, UNITED STATES
Denich, Kenneth, Edmonton, CANADA
Schmidt, M. Alexander, Muenster, GERMANY, FEDERAL REPUBLIC OF
PI US 2002142008 A1 20021003
AI US 2001-833079 A1 20010412 (9)
PRAI US 2000-196491P 20000412 (60)
DT Utility
FS APPLICATION
LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 967
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 33 OF 92 USPATFULL
AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the

production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the **deletion** of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.

AN 2002:209671 USPATFULL
TI VMP-like sequences of pathogenic borrelia
IN Norris, Steven J., Houston, TX, United States
Zhang, Jing-Ren, Houston, TX, United States
Hardham, John M., Houston, TX, United States
Howell, Jerrilyn K., Houston, TX, United States
Barbour, Alan G., Irvin, CA, United States
Weinstock, George M., Houston, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6437116 B1 20020820
WO 9731123 19970828
AI US 1999-125619 19990127 (9)
WO 1997-US2952 19970220
19990127 PCT 371 date
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swartz, Rodney P
LREP Fulbright & Jaworski LLP
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 19 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 5173
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 34 OF 92 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method that combines variegated peptide display libraries, e.g., in a "display mode", with soluble secreted peptide libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of peptides having a desired biological activity.

AN 2002:174944 USPATFULL
TI Methods and reagents for isolating biologically active peptides
IN Gyuris, Jeno, Winchester, MA, United States
Morris, Aaron J., Boston, MA, United States
PA GPC Biotech, Inc., Waltham, MA, United States (U.S. corporation)
PI US 6420110 B1 20020716
AI US 1998-174943 19981019 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Ponnaluri, Padmashri
LREP Ropes & Gray, Vincent, Matthew P., Halstead, David P.
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 3145
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 35 OF 92 USPATFULL
AB Disclosed are bacteria having virulence attenuated by a mutation to the regulatory gene poxR. Also disclosed is a method of producing bacteria having virulence attenuated by mutating to the regulatory gene poxR. Such bacteria are useful for inducing an immune response in an animal or human against virulent forms of the bacteria with reduced risk of a virulent infection. Such bacteria are also useful to allow use of normally virulent bacteria as research tools with reduced risk of virulent infection. In a preferred embodiment, poxR attenuated bacteria

can be used as a vaccine to induce immunoprotection in an animal against virulent forms of the bacteria. The disclosed bacteria can also be used as hosts for the expression of heterologous genes and proteins or to deliver DNA for genetic **immunization**. Attenuated bacteria with such expression can be used, for example, to deliver and present heterologous antigens to the immune system of an animal. Such presentation on live bacteria can lead to improved stimulation of an immune response by the animal to the antigens. It has been discovered that bacteria harboring a poxR mutation has significantly reduced virulence. Also disclosed is the nucleotide sequence of the poxR gene from **Salmonella** typhimurium, and the amino acid sequence of the encoded protein. The encoded protein has 325 amino acids and has significant sequence similarity to previously uncharacterized open reading frames in E. coli and Haemophilus influenzae.

AN 2002:171629 USPATFULL
TI METHODS OF PRODUCING AND USING VIRULENCE ATTENUATED POXR MUTANT BACTERIA
IN KANIGA, KONE, ST. LOUIS, MO, UNITED STATES
SUNDARAM, PREETI, CHESTERFIELD, MO, UNITED STATES
PI US 2002090376 A1 20020711
US 6537558 B2 20030325
AI US 1997-829402 A1 19970331 (8)
DT Utility
FS APPLICATION
LREP THOMPSON COBURN, LLP, ONE FIRSTAR PLAZA, SUITE 3500, ST LOUIS, MO, 63101
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1661
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 36 OF 92 USPATFULL
AB Provided are streptolysin S (SLS) polypeptides, peptides, and variants thereof, antibodies directed thereto, and isolated nucleic acids encoding such proteins. In one embodiment, a method is provided wherein a synthetic peptide of SLS is used to elicit an immune response specific for SLS in a subject to treat or prevent a streptococcal infection. In other embodiments, antibodies that neutralize the hemolytic activity of the SLS toxin may be used as a **vaccinating** agent.

AN 2002:164409 USPATFULL
TI Streptococcal streptolysin S vaccines
IN Dale, James B., Memphis, TN, UNITED STATES
PA University of Tennessee Research Corporation, Knoxville, TN, 37996-1527 (U.S. corporation)
PI US 2002086023 A1 20020704
AI US 2001-975455 A1 20011010 (9)
PRAI US 2000-239432P 20001010 (60)
DT Utility
FS APPLICATION
LREP SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092
CLMN Number of Claims: 53
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 37 OF 92 USPATFULL
AB The present invention provides methods for the modulation of vascular tone in a patient having compromised vascular tissue, which methods comprise the administration of a chloride channel blocking agent or a pharmaceutically acceptable salt thereof.

AN 2002:126808 USPATFULL
TI Use of CLC3 chloride channel blockers to modulate vascular tone
IN Lamb, Fred S., Solon, IA, UNITED STATES

Schutte, Brian C., Iowa City, IA, UNITED STATES
Yang, Baoli, Cedar Rapids, IA, UNITED STATES
PI US 2002065325 A1 20020530
AI US 2001-930105 A1 20010815 (9)
RLI Continuation-in-part of Ser. No. US 2000-512926, filed on 25 Feb 2000, PENDING
PRAI US 1999-121727P 19990226 (60)
DT Utility
FS APPLICATION
LREP SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A., P.O. BOX 2938, MINNEAPOLIS, MN, 55402
CLMN Number of Claims: 43
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)
LN.CNT 2662
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 38 OF 92 USPATFULL
AB A method of **immunizing** against plaque forming diseases using display technology is provided. The method utilize novel agents, or pharmaceutical compositions for **vaccination** against plaque forming diseases which rely upon presentation of an antigen or epitope on a display vehicle. The method further includes agents, or pharmaceutical compositions for **vaccination** against plaque forming diseases, which rely upon presentation of an antibody, or an active portion thereof, on a display vehicle. Whether antigens or antibodies are employed, disaggregation of plaques results from the **immunization**. The methods of the present invention also generally relates to treating and/or diagnosing neurological diseases and disorders of the central nervous, regardless of whether the disease or disorder is plaque-forming or non-plaque forming.
AN 2002:99410 USPATFULL
TI Methods and compostions for the treatment and/or diagnosis of neurological diseases and disorders
IN Solomon, Beka, Herzlia Pituach, ISRAEL
Frenkel, Dan, Rehovot, ISRAEL
PI US 2002052311 A1 20020502
AI US 2001-808037 A1 20010315 (9)
RLI Continuation-in-part of Ser. No. US 2000-629971, filed on 31 Jul 2000, PENDING Continuation-in-part of Ser. No. US 1999-473653, filed on 29 Dec 1999, PENDING
PRAI US 1999-152417P 19990903 (60)
DT Utility
FS APPLICATION
LREP BROWDY AND NEIMARK, P.L.L.C., 624 NINTH STREET, NW, SUITE 300, WASHINGTON, DC, 20001-5303
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 30 Drawing Page(s)
LN.CNT 4074
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 39 OF 92 USPATFULL
AB The invention provides methods and compositions for inducing and maintaining tolerance to epitopes or antigens containing the epitopes. The compositions include expression cassettes and vectors including DNA sequences coding for a fusion immunoglobulin operably linked to transcriptional and translational control regions functional in a hemopoietic or lymphoid cell. The fusion immunoglobulin includes at least one heterologous tolerogenic epitope at the N-terminus variable region of the immunoglobulin. Cells stably transformed with the expression vector are formed and used to produce fusion immunoglobulin. The invention also provides methods for screening for novel tolerogenic epitopes and for inducing and maintaining tolerance. The methods of the

invention are useful in the diagnosis and treatment of autoimmune or allergic immune responses.

AN 2002:92045 USPATFULL
TI TOLEROGENIC FUSION PROTEINS OF IMMUNOGLOBULINS AND METHODS FOR INDUCING AND MAINTAINING TOLERANCE
IN SCOTT, DAVID W., PITTSFORD, NY, UNITED STATES
ZAMBIDIS, ELIAS T., ROCHESTER, NY, UNITED STATES
PI US 2002048562 A1 20020425
AI US 1998-160076 A1 19980924 (9)
RLI Division of Ser. No. US 1994-195874, filed on 11 Feb 1994, GRANTED, Pat. No. US 5817308
DT Utility
FS APPLICATION
LREP SHMUEL LIVNAT, MORRISON & FOERSTER, 2000 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 200061888
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1406
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 40 OF 92 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method that combines variegated antibody display libraries, e.g., in a "display mode", with soluble secreted antibody libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of antibodies having a desired biological activity.

AN 2002:43170 USPATFULL
TI Methods and reagents for isolating biologically active antibodies
IN Gyuris, Jeno, Winchester, MA, UNITED STATES
Ewert, Sebastian-Meier, Wolfratshausen, GERMANY, FEDERAL REPUBLIC OF
Nagy, Zolton, Wolfratshausen, GERMANY, FEDERAL REPUBLIC OF
Morris, Aaron, Brighton, MA, UNITED STATES
PI US 2002025536 A1 20020228
AI US 2001-891557 A1 20010626 (9)
PRAI US 2000-214200P 20000626 (60)
DT Utility
FS APPLICATION
LREP ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
CLMN Number of Claims: 83
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 3051
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 41 OF 92 USPATFULL
AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by infection with Borrelia burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyme disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.

AN 2002:24372 USPATFULL
TI Compositions and methods comprising DNA sequences encoding B. burgdorferi polypeptides
IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States

PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 6344552 B1 20020205
AI US 1995-455973 19950531 (8)
RLI Division of Ser. No. US 1994-320161, filed on 7 Oct 1994, now patented, Pat. No. US 5747294 Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned Continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned Continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Bui, Phuong T
LREP Fish & Neave, Haley, Jr., Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 42 OF 92 USPATFULL
AB Novel hemolysin fusion proteins can be produced by inserting a foreign nucleotide sequence encoding an immunogenic peptide in a region of HlyA corresponding to the CnBr II through CnBr V region of HlyA.
AN 2002:3620 USPATFULL
TI Hemolysin fusion proteins, their production and use
IN O'Hanley, Peter, Washington, DC, UNITED STATES
LaLonde, Guy, Woodside, CA, UNITED STATES
PI US 2002001593 A1 20020103
AI US 2001-833063 A1 20010412 (9)
PRAI US 2000-196492P 20000412 (60)
DT Utility
FS APPLICATION
LREP Stephen B. Maebius, FOLEY & LARDNER, Suite 500, 3000 K Street, N.W., Washington, DC, 20007-5109
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 194
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 43 OF 92 USPATFULL
AB Methods and compositions for conferring tick immunity and preventing or reducing the transmission of tick-borne pathogens. Tick polypeptides, fragments and derivatives; fusion and multimeric proteins comprising the polypeptides, fragments or derivatives; nucleic acid molecules encoding them; antibodies directed against the polypeptides, fusion proteins or multimeric proteins and compositions comprising the antibodies. Vaccines comprising the polypeptides, fragments or derivatives, alone or in addition to other protective polypeptides. Methods comprising the polypeptides, antibodies and vaccines.
AN 2001:218013 USPATFULL
TI Tick antigens and compositions and methods comprising them
IN Kantor, Fred S., Orange, CT, United States
Fikrig, Erol, Guilford, CT, United States
Das, Subrata, New Haven, CT, United States
PI US 2001046499 A1 20011129
AI US 2000-728914 A1 20001201 (9)
PRAI US 1999-169048P 19991203 (60)
US 2000-240716P 20001016 (60)
DT Utility
FS APPLICATION
LREP FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY, 10020-1105
CLMN Number of Claims: 54
ECL Exemplary Claim: 1

DRWN 49 Drawing Page(s)
LN.CNT 3235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 44 OF 92 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive **immunization** and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:196810 USPATFULL
TI DbpA compositions and methods of use
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6312907 B1 20011106
AI US 2000-489352 20000121 (9)
RLI Division of Ser. No. US 117257, now patented, Pat. No. US 6214355 Continuation-in-part of Ser. No. US 945476 Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 31 Drawing Page(s)
LN.CNT 5376
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 45 OF 92 USPATFULL
AB The present invention relates to **Salmonella** bacteria for use as a vaccine. The invention also relates to vaccines based thereon that are useful for the prevention of microbial pathogenesis. Further, the invention relates to the use of such bacteria or the manufacture of such vaccines. Finally, the invention relates to methods for the preparation of such vaccines.
AN 2001:155455 USPATFULL
TI **Salmonella** vaccine
IN Nuijten, Petrus Johannes Maria, Boxmeer, Netherlands
Witvliet, Maarten Hendrik, Oostrum, Netherlands
PI US 2001021386 A1 20010913
AI US 2000-749025 A1 20001227 (9)
PRAI EP 1999-204564 19991228
DT Utility
FS APPLICATION
LREP William M. Blackstone, Akzo nobel Patent Department, Suite 206, 1300 Piccard Drive, Rockville, MD, 20850
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)

LN.CNT 745
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 46 OF 92 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive **immunization** and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:93284 USPATFULL
TI Decorin binding protein compositions and methods of use
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6248517 B1 20010619
WO 9634106 19961031
AI US 1997-945476 19971224 (8)
WO 1996-US5886 19960424
19971224 PCT 371 date
19971224 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Zitomer, Stephanie W..
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 57
ECL Exemplary Claim: 1
DRWN 42 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 4945
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 47 OF 92 USPATFULL
AB The present invention relates to peptides which exhibit antifusogenic and antiviral activities. The peptides of the invention consist of a 16 to 39 amino acid region of a human respiratory syncytial virus protein. These regions were identified through computer algorithms capable of recognizing the ALLMOTI5, 107x178x4, or PLZIP amino acid motifs. These motifs are associated with the antifusogenic and antiviral activities of the claimed peptides.
AN 2001:67794 USPATFULL
TI Human respiratory syncytial virus peptides with antifusogenic and antiviral activities
IN Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6228983 B1 20010508
AI US 1995-485264 19950607 (8)
RLI Division of Ser. No. US 1995-470896, filed on 6 Jun 1995
Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994
Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994

Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS Granted
EXNAM Primary Examiner: Scheiner, Laurie; Assistant Examiner: Parkin, Jeffrey S.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 62
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 32166
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 48 OF 92 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive **immunization** and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:67646 USPATFULL
TI Decorin binding protein compositions
IN Guo, Betty, Houston, TX, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M Unversity System, College Station, TX, United States (U.S. corporation)
PI US 6228835 B1 20010508
AI US 1998-221938 19981228 (9)
RLI Division of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987, issued on 29 Dec 1998 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 25 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 4504
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 49 OF 92 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive **immunization** and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in

vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.

AN 2001:51579 USPATFULL
TI DbpA compositions
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6214355 B1 20010410
WO 9727301 19970731
AI US 1998-117257 19980722 (9)
WO 1996-US17081 19961022
19981029 PCT 371 date
19981029 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 945476 Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987, issued on 29 Dec 1998 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 31 Drawing Page(s)
LN.CNT 5444
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 50 OF 92 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a FlaC **flagellin** protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the FlaC **flagellin** protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlaA or FlaB proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.

AN 2001:48033 USPATFULL
TI **Flagellin** gene, FlaC of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA University of Toronto, Toronto, Canada (non-U.S. corporation)
PI US 6211159 B1 20010403
AI US 1997-837317 19970411 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 912
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 51 OF 92 USPATFULL
AB Nucleic acid fragments are disclosed which encode a polypeptide antigen reactive with antisera from rabbits immunised with a 66 kDa protein from Borrelia garinii IP90. The presence of nucleic acid fragments encoding such a polypeptide antigen as well as the presence of the polypeptide antigen have been demonstrated in three strains of B. burgdorferi sensu lato, but are substantialle absent from at least 95% of randomly selected B. hermsii, B. crocidurae, B. anserina, and B. hispanica. The

encoded polypeptide is surface exposed on the bacterial surface, it is highly conserved, and is thus potentially useful as a vaccine agent and as a diagnostic agent in the diagnosis of infections with B. burgdorferi as are the characteristic nucleic acid fragments of the invention. Also disclosed are methods of producing the polypeptide antigen according to the invention as are antibodies directed against the antigen.

AN 2001:40233 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstom, Sven, Umea, Sweden
Barbour, Alan George, Irvine, CA, United States
PA Symbicom Aktiebolag, Umea, Sweden (non-U.S. corporation)
PI US 6204018 B1 20010320
WO 9535379 19951228
AI US 1997-750494 19970612 (8)
WO 1995-US7665 19950619
19970612 PCT 371 date
19970612 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1994-262220, filed on 20 Jun 1994, now patented, Pat. No. US 6054296
DT Utility
FS Granted
EXNAM Primary Examiner: Minnifield, Nita M.
LREP Frommer Lawrence & Haug LLP, Frommer, William S., Kolawski, Thomas J.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2159
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 52 OF 92 USPATFULL
AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyre disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.

AN 2001:32799 USPATFULL
TI Compositions and methods for the prevention and diagnosis of Lyme disease
IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 6197301 B1 20010306
AI US 1995-455829 19950531 (8)
RLI Division of Ser. No. US 1994-320161, filed on 7 Oct 1994, now patented, Pat. No. US 5747294 Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned Continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned Continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Bui, Phuong T.
LREP Fish & Neave, Haley, Jr., Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 86
ECL Exemplary Claim: 7
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2506

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 53 OF 92 USPATFULL

AB Methods for obtaining surface expression of a desired protein or polypeptide in Gram-positive host organisms are provided. In addition, vectors useful in such methods as well as Gram-positive host organisms transformed with such vectors are disclosed.

AN 2001:25429 USPATFULL

TI Materials and methods relating to the attachment and display of substances on cell surfaces

IN Steidler, Lothar, Ghent, Belgium
Remaut, Erik, Ghent, Belgium
Wells, Jeremy Mark, Cambridge, United Kingdom

PA Vlaams Interuniversitair Instituut voor Biotechnologie (VIB) vzw, Zwijnaarde, Belgium (non-U.S. corporation)

PI US 6190662 B1 20010220

AI US 1998-36609 19980306 (9)

RLI Continuation of Ser. No. WO 1996-GB2195, filed on 6 Sep 1996

PRAI GB 1995-18323 19950907

DT Utility

FS Granted

EXNAM Primary Examiner: Navarro, Albert

LREP Pennie & Edmonds LLP

CLMN Number of Claims: 24

ECL Exemplary Claim: 1

DRWN 10 Drawing Figure(s); 7 Drawing Page(s)

LN.CNT 964

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 54 OF 92 USPATFULL

AB The 170 kDa adhesin subunit of the Entamoeba histolytica Gal/GalNAc adherence lectin is encoded by members of a gene family that includes hgl1, hgl2 and a newly discovered gene, hgl3. The DNA and encoded protein sequences of the hgl genes are disclosed. A number of proteins and peptide fragments of the adhesin as well as other functional derivatives, preferably produced by recombinant methods in prokaryotic cells are disclosed. A preferred peptide for a vaccine composition corresponds to amino acids 896-998 of the mature 170 kDa lectin and contains the galactose- and N-acetylgalactosamine-binding activity of the native lectin. These compositions are useful as immunogenic vaccine components and as diagnostic reagents. Methods are provided for a vaccine comprising one or more peptides of the lectin to **immunize** subjects at risk for infection by E. histolytica. Additionally, immunoassay methods are disclosed for measuring antibodies specific for an epitope of the lectin. These methods detect E. histolytica-specific antibodies, some of which are specific for epitopes characteristic of pathogenic strains, nonpathogenic strains, or both.

AN 2001:21758 USPATFULL

TI Recombinant Entamoeba histolytica lectin subunit peptides and reagents specific for members of the 170 kDa subunit multigene family

IN Mann, Barbara J., Charlottesville, VA, United States
Dodson, James M., Charlottesville, VA, United States
Petri, Jr., William A., Charlottesville, VA, United States

PA University of Virginia Patent Foundation, Charlottesville, VA, United States (U.S. corporation)

PI US 6187310 B1 20010213

AI US 1997-937236 19970916 (8)

RLI Continuation-in-part of Ser. No. US 569214 Continuation of Ser. No. US 1993-78476, filed on 17 Jun 1993, now abandoned Continuation of Ser. No. US 1993-130735, filed on 1 Oct 1993, now abandoned Continuation-in-part of Ser. No. US 1990-615719, filed on 21 Nov 1990, now patented, Pat. No. US 5260429 Continuation-in-part of Ser. No. US 1993-75226, filed on 10 Jun 1993, now patented, Pat. No. US 5401831 Division of Ser. No. US 1990-479691, filed on 13 Feb 1990, now patented, Pat. No. US 5272058

Continuation-in-part of Ser. No. US 1989-456579, filed on 29 Dec 1989, now patented, Pat. No. US 5004608 Continuation of Ser. No. US 1988-143626, filed on 13 Jan 1988, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Kunz, Gary L.; Assistant Examiner: Gucker, Stephen
LREP Livnat, ShmuelRader, Fishman & Grauer
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 1988
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 55 OF 92 USPATFULL
AB This invention relates to mutant strains of gram-negative bacteria that constitutively secrete proteins via the type III secretion machinery. It also relates to methods of identifying molecules that are able to activate or inhibit secretion in wild-type strains of gram-negative bacteria by exposing gram-negative bacterial cells to a sample molecule, wherein said bacterial cells contain a reporter gene transcriptionally fused to a promoter of a gene activated or regulated by the type III secretion machinery, and detecting the presence or activity of the product of the reporter gene.
AN 2000:142109 USPATFULL
TI Method for screening for inhibitors and activators of type III secretion machinery in gram-negative bacteria
IN Demers, Brigitte, Paris, France
Sansonetti, Philippe J., Paris, France
Parsot, Claude, Paris, France
PA Institut Pasteur, Paris, France (non-U.S. corporation)
Institut Nationale de la Sante et de la Recherche, Paris, France (non-U.S. corporation)
PI US 6136542 20001024
AI US 1999-306756 19990507 (9)
PRAI US 1998-85234P 19980513 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Ketter, James
LREP Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 946
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 56 OF 92 USPATFULL
AB The present invention is directed to recombinant genes and their encoded proteins which are recombinant **flagellin** fusion proteins. Such fusion proteins comprise amino acid sequences specifying an epitope encoded by a **flagellin** structural gene and an epitope of a heterologous organism which is immunogenic upon introduction of the fusion protein into a vertebrate host. The recombinant genes and proteins of the present invention can be used in vaccine formulations, to provide protection against infection by the heterologous organism, or to provide protection against conditions or disorders caused by an antigen of the organism. In a specific embodiment, attenuated invasive bacteria expressing the recombinant **flagellin** genes of the invention can be used in live vaccine formulations. The invention is illustrated by way of examples in which epitopes of malaria circumsporozoite antigens, the B subunit of Cholera toxin, surface and presurface antigens of Hepatitis B. VP7 polypeptide of rotavirus, envelope glycoprotein of HIV, and M protein of Streptococcus, are expressed in recombinant **flagellin** fusion proteins which assemble into functional flagella, and which provoke an immune response

directed against the heterologous epitope, in a vertebrate host.
AN 2000:134749 USPATFULL
TI Recombinant **flagellin** vaccines
IN Majarian, William R., Mt. Royal, NJ, United States
Stocker, Bruce A. D., Palo Alto, CA, United States
Newton, Salete M. C., Mountain View, CA, United States
PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)
The Board of Trustees of the Leland Stanford Junior University, Stanford, CA, United States (U.S. corporation)
PI US 6130082 20001010
AI US 1992-837668 19920214 (7)
RLI Continuation of Ser. No. US 1989-348430, filed on 5 May 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-190570, filed on 5 May 1988, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Mosher, Mary E.
LREP Hamilton, Brook, Smith & Reynolds, P.C.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 15 Drawing Figure(s); 17 Drawing Page(s)
LN.CNT 2404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 57 OF 92 USPATFULL
AB The invention relates to novel Borrelia, and OspA antigens derived therefrom. These antigens show little homology with known OspA's and are therefore useful as vaccine and diagnostic reagents. Multicomponent vaccines based on OspA's from different Borrelia groups are also disclosed.
AN 2000:117295 USPATFULL
TI Osp A proteins of Borrelia burgdorferi subgroups, encoding genes and vaccines
IN Lobet, Yves, Rixensart, Belgium
Simon, Markus, Frieburg, Germany, Federal Republic of
Schaible, Ulrich, Frieburg, Germany, Federal Republic of
Wallich, Reinhard, Heidelberg, Germany, Federal Republic of
Kramer, Michael, Frieburg, Germany, Federal Republic of
PA Smithkline Beecham Biologicals (S.A.), Rixensart, Belgium (non-U.S. corporation)
PI US 6113914 20000905
WO 9304175 19930304
AI US 1994-193159 19940705 (8)
WO 1992-EP1827 19920811
19940705 PCT 371 date
19940705 PCT 102(e) date
PRAI GB 1991-17602 19910815
GB 1991-22301 19911021
GB 1992-11317 19920528
GB 1992-11318 19920528
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Dustman, Wayne J., King, William T., Kinzig, Charles M.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1443
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 58 OF 92 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA

molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.

AN 2000:91741 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Umea, Sweden (non-U.S. corporation)
PI US 6090586 20000718
AI US 1995-468878 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994 which is a continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawrence & Haug LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3064
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 59 OF 92 USPATFULL
AB A protein associated with adherence and invasion of Campylobacter spp. including C. jejuni and C. coli is provided. Methods are disclosed for detecting Campylobacter spp. including C. jejuni and C. coli in a biological sample by determining the presence of the protein or a nucleic acid molecule encoding the protein in the sample. Compositions for treatment of infections diseases and vaccines are also described.

AN 2000:87935 USPATFULL
TI Gene encoding invasion protein of campylobacter species
IN Chan, Voon Loong, 93 Elm Ridge Drive, Toronto, Ontario, Canada M6B 1A6
Joe, Angela, #1122, 341 Bloor Street West, Toronto, Ontario, Canada M5S 1N8
Hong, Yuwen, 300 Regina Street North, Waterloo, Ontario, Canada N2J 4H2
PI US 6087105 20000711
AI US 1998-56783 19980408 (9)
PRAI US 1997-43414P 19970408 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Bereskin & Parr
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 60 OF 92 USPATFULL
AB This invention relates to flagella-less strains of Borrelia and to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to

Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.

AN 2000:77033 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio G., Newbury Park, CA, United States
Sadziene, Adriadna, San Antonio, TX, United States
PA The University of Texas System, Board of Regents, Austin, TX, United States (U.S. corporation)
PI US 6077515 20000620
AI US 1996-696372 19960813 (8)
RLI Continuation of Ser. No. US 1993-124290, filed on 20 Sep 1993, now patented, Pat. No. US 5585102, issued on 17 Dec 1996 which is a continuation of Ser. No. US 1991-641143, filed on 11 Jan 1991, now patented, Pat. No. US 5436000, issued on 25 Jul 1995
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Arnold White & Durkee
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1355

L6 ANSWER 61 OF 92 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.

AN 2000:67433 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Ulmea, Sweden (non-U.S. corporation)
PI US 6068842 20000530
AI US 1995-471733 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994 which is a continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawerence &

Haug LLP
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3138
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 62 OF 92 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.
AN 2000:50546 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Umea, Sweden (non-U.S. corporation)
PI US 6054296 20000425
AI US 1994-262220 19940620 (8)
RLI Continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
PRAI DK 1988-5902 19881024
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawrence & Haug LLP
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3433
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 63 OF 92 USPATFULL
AB This invention relates to methods and compositions for producing a fusion protein comprised of Haemophilus influenzae P2 amino acid sequences, wherein in place of loop 5, or a portion thereof, is displayed a heterologous or homologous peptide sequence having biological activity. The fusion protein may be expressed on the surface of the host cell, such as in H. influenzae, which has been transformed with a fusion sequence that is operatively linked to at least one regulatory control element for expression of the fusion protein. Alternatively, the fusion protein can be purified from the host cell in the expression system, if the fusion protein remains associated with the host cell; or from the media of the expression system, if the fusion protein is a secreted form.
AN 2000:27773 USPATFULL
TI Peptide expression and delivery system
IN Murphy, Timothy F., East Amherst, NY, United States
Yi, Kyungcheol, Lilburn, GA, United States
PA Research Foundation of State University of New York, Amherst, NY, United States (U.S. corporation)
PI US 6033877 20000307

AI US 1996-740644 19961031 (8)
PRAI US 1996-6168P 19961102 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Guzo, David; Assistant Examiner: Larson, Thomas G.
LREP Hodgson, Russ, Andrews, Woods & Goodyear LLP
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 64 OF 92 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a basal body rod protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the basal body rod protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlgF or FlgG proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.
AN 2000:12588 USPATFULL
TI Basal body rod protein FlgF of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
PI US 6020125 20000201
AI US 1995-483857 19950607 (8)
RLI Continuation of Ser. No. US 1995-436748, filed on 8 May 1995, now patented, Pat. No. US 5827654
DT Utility
FS Granted
EXNAM Primary Examiner: Chin, Christopher L.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1392
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 65 OF 92 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Camplylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 2000:4664 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Dr., Toronto Ontario M6B 1A6, Canada
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto Ontario M3A 1H8, Canada
PI US 6013501 20000111
AI US 1997-853552 19970509 (8)
RLI Division of Ser. No. US 1995-485216, filed on 7 Jun 1995, now patented, Pat. No. US 5695960 which is a continuation of Ser. No. WO 1994-CA270, filed on 13 May 1994 which is a continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Saidha, Tekchand
LREP Merchant & Gould
CLMN Number of Claims: 3
ECL Exemplary Claim: 1

DRWN 6 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1677
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 66 OF 92 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Campylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 1999:141596 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Drive, Toronto Ontario, Canada M6B 1A6
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto Ontario, Canada M3A 1H8
PI US 5981189 19991109
AI US 1998-3245 19980106 (9)
RLI Division of Ser. No. US 1997-853552, filed on 9 May 1997 which is a division of Ser. No. US 1995-485216, filed on 7 Jun 1995, now patented, Pat. No. US 5695960 which is a continuation of Ser. No. WO 1994-CA270, filed on 13 May 1994 which is a continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Achutamurthy, Ponnathapura; Assistant Examiner: Saidha, Tekchand
LREP Merchant & Gould
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1711
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 67 OF 92 USPATFULL
AB A class of carrier molecules which when covalently linked to an immunogen enhances the host's immune response to that immunogen, regardless of whether the complex of carrier and immunogen is administered parenterally, enterally, or orally to the host. Also provided are processes for production of the complexes, as well as hybrid DNA sequences encoding the complexes, recombinant DNA molecules bearing the hybrid DNA sequences, transformed hosts and vaccines comprising the complexes, and methods for production of the vaccine.
AN 1999:136988 USPATFULL
TI Immunopotentiation through covalent linkage between immunogen and immunopotentiating molecules
IN Barnes, Thomas Michael, Lane Cove, Australia
Lehrbach, Philip Ralph, Wahroonga, Australia
Russell-Jones, Gregory John, Middle Cove, Australia
PA Bioenterprises PTY Limited, Roseville, Australia (non-U.S. corporation)
PI US 5976839 19991102
AI US 1995-461003 19950605 (8)
RLI Division of Ser. No. US 1992-903121, filed on 23 Jun 1992, now abandoned which is a continuation of Ser. No. US 1987-159968, filed on 21 Feb 1987, now abandoned
PRAI AU 1987-846 19870313
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Foley & Lardner
CLMN Number of Claims: 18
ECL Exemplary Claim: 2
DRWN 14 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 690
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 68 OF 92 USPATFULL

AB This invention pertains to a complementation system for the selection and maintenance of expressed genes in bacterial hosts. The invention provides stable vectors which can be selected and maintained by complementation of chromosomal **deletion** mutations of purA (adenylosuccinate synthetase), obviating the use of antibiotic resistance genes. This system is useful in production organisms during fermentation and in live vaccine bacteria, such as attenuated **Salmonella** typhi. This system allows for selection of chromosomal integrants and for selection and stable plasmid maintenance in the **vaccinated** host without application of external selection pressure.

AN 1999:120887 USPATFULL

TI Stable pura vectors and uses therefor

IN Brey, Robert N., Rochester, NY, United States
Fulginiti, James P., Canandaigua, NY, United States
Anilionis, Algis, Pittsford, NY, United States

PA Praxis Biologics, Inc., West Henrietta, NJ, United States (U.S. corporation)

PI US 5961983 19991005

AI US 1995-448907 19950524 (8)

RLI Division of Ser. No. US 1995-380297, filed on 30 Jan 1995 which is a continuation of Ser. No. US 1994-204903, filed on 2 Mar 1994, now abandoned which is a continuation of Ser. No. US 1991-695706, filed on 3 May 1991, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Brusca, John S.

LREP Hamilton, Brook, Smith & Reynolds, P.C.

CLMN Number of Claims: 32

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 1389

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 69 OF 92 USPATFULL

AB The invention relates to novet Borrelia, and OspA antigens derived therefrom. These antigens show little homology with known OspA's and are therefore useful as vaccine and diagnostic reagents. Multicomponent vaccines based on OspA's from different Borrelia groups are also disclosed.

AN 1999:99384 USPATFULL

TI Osp A proteins of Borrelia burgdorferi subgroups, encoding genes and vaccines

IN Lobet, Yves, Rixensart, Belgium
Simon, Markus, Frieburg, Germany, Federal Republic of
Schaible, Ulrich, Frieburg, Germany, Federal Republic of
Wallich, Reinhard, Heidelberg, Germany, Federal Republic of
Kramer, Michael, Frieburg, Germany, Federal Republic of

PA SmithKline Beecham Biologicals, United Kingdom (non-U.S. corporation)
Max-Planck-Gesellschaft zur Forderung der Wissenschafter e.V., Germany, Federal Republic of (non-U.S. corporation)
Duetsches Krebsforschungszentrum Stiftung des offentlichen Rechts, Germany, Federal Republic of (non-U.S. corporation)

PI US 5942236 19990824

AI US 1995-441857 19950516 (8)

RLI Continuation of Ser. No. US 193159

PRAI GB 1991-17602 19910815
GB 1991-22301 19911021
GB 1992-11317 19920528
GB 1992-11318 19920528

DT Utility

FS Granted

EXNAM Primary Examiner: Minnifield, Nita
LREP Dustman, Wayne J., King, William T., Kinzig, Charles M.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 70 OF 92 USPATFULL
AB Bites from Amblyomma americanum, a hard tick, have been associated with a Lyme disease-like illness in the southeastern and south-central United States. Present in 2% of ticks collected in four states were uncultivable spirochetes. Through use of the polymerase chain reaction, partial sequences of the **flagellin** and 16s rRNA genes of microorganisms from Texas and New Jersey were obtained. The sequences showed that the spirochete was a Borrelia sp. but distinct from other known members of this genus, including B. burgdorferi, the agent of Lyme disease. Species-specific differences in the sequences of the **flagellin** protein, the **flagellin** gene and the 16s rRNA gene between the new Borrelia species and previously known species provide compositions and methods for assay for determining the presence of this new spirochete, or for providing evidence of past or present infection by this spirochete in animal reservoirs and humans.
AN 1999:88799 USPATFULL
TI Diagnostic tests for a new spirochete, Borrelia lonestari sp. nov.
IN Barbour, Alan G., San Antonio, TX, United States
Carter, Carol, Bulverde, TX, United States
PA Board of Regents University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5932220 19990803
AI US 1995-437013 19950508 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Arnold White & Durkee
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 2343
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 71 OF 92 USPATFULL
AB This invention pertains to a complementation system for the selection and maintenance of expressed genes in bacterial hosts. The invention provides stable vectors which can be selected and maintained by complementation of chromosomal **deletion** mutations of purA (adenylosuccinate synthetase), obviating the use of antibiotic resistance genes. This system is useful in production organisms during fermentation and in live vaccine bacteria, such as attenuated **Salmonella** typhi. This system allows for selection of chromosomal integrants and for selection and stable plasmid maintenance in the **vaccinated** host without application of external selection pressure.
AN 1999:75520 USPATFULL
TI Stable purA vectors and uses therefor
IN Brey, Robert N., Rochester, NY, United States
Fulginiti, James P., Canandaigua, NY, United States
Anilionis, Algis, Pittsford, NY, United States
PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)
PI US 5919663 19990706
AI US 1995-380297 19950130 (8)
RLI Continuation of Ser. No. US 1994-204903, filed on 2 Mar 1994, now abandoned which is a continuation of Ser. No. US 1991-695706, filed on 3 May 1991, now abandoned

DT Utility
FS Granted
EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Brusca, John S.
LREP Hamilton, Brook, Smith & Reynolds,P.C.
CLMN Number of Claims: 41
ECL Exemplary Claim: 8
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 72 OF 92 USPATFULL
AB A fusion protein which comprises the B subunit of the labile toxin (LT-B) of E. coli and part of the **flagellin** (flaA) protein of C. jejuni is antigenic and is useful for decreasing colonization in chickens by Campylobacter species. The protein is produced by E. coli cells, transformed by the plasmid pBEB into which DNA sequences encoding the novel protein have been introduced.
AN 1999:40230 USPATFULL
TI Campylobacteri jejuni **flagellin**-escherichia coli LT-B fusion protein
IN Meinersmann, Richard J., Lithonia, GA, United States
Khoury, Christian A., Philadelphia, PA, United States
PA The United States of America as represented by the Secretary of Agriculture, Washington, DC, United States (U.S. government)
PI US 5888810 19990330
AI US 1997-784218 19970116 (8)
RLI Division of Ser. No. US 1993-150305, filed on 12 Nov 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.
LREP Silverstein, M. Howard, Fado, John, Graeter, Janelle S.
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 805
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 73 OF 92 USPATFULL
AB Class of carrier molecules which when covalently linked to an immunogen enhances the host's immune response to that immunogen regardless of whether the complex of carrier and immunogen is administered parenterally, enterally, or orally to the host. In addition, processes are provided for production of the complexes, as well as hybrid DNA sequences encoding complexes, recombinant DNA molecules bearing the hybrid DNA sequences, transformant hosts and vaccines comprising the complexes as well as methods for production of the vaccine.
AN 1999:24309 USPATFULL
TI Immunopotentiating complexes comprising TraT proteins
IN Barnes, Thomas Michael, Lane Cove, Australia
Lehrbach, Philip Ralph, Wahroonga, Australia
Russell-Jones, Gregory John, Middle Cove, Australia
PA Bioenterprises Pty Limited, East Roseville, Australia (non-U.S. corporation)
PI US 5874083 19990223
AI US 1995-461324 19950605 (8)
RLI Continuation of Ser. No. US 1992-903121, filed on 23 Jun 1992, now abandoned which is a continuation of Ser. No. US 1987-159968, filed on 21 Dec 1987, now abandoned
PRAI AU 1986-5559 19860421
AU 1987-846 19870313
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Foley & Lardner

CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 822
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 74 OF 92 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive **immunization** and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 1998:162259 USPATFULL
TI Decorin binding protein compositions and methods of use
IN Guo, Betty, Houston, TX, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 5853987 19981229
AI US 1996-589711 19960122 (8)
RLI Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.; Assistant Examiner: Tung, Joyce
LREP Arnold, White & Durkee
CLMN Number of Claims: 68
ECL Exemplary Claim: 1
DRWN 25 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 4684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 75 OF 92 USPATFULL
AB A fusion protein which comprises the B subunit of the labile toxin (LT-B) of E. coli and part of the **flagellin** (flaA) protein of C. jejuni is antigenic and is useful for decreasing colonization in chickens by Campylobacter species. The protein is produced by E. coli cells, transformed by the plasmid pBEB into which DNA sequences encoding the novel protein have been introduced.
AN 1998:144221 USPATFULL
TI Campylobacter jejuni **flagellin**/Escherichia coli LT-B fusion protein
IN Meinersmann, Richard J., Lithonia, GA, United States
Khoury, Christian A., Philadelphia, PA, United States
PA The United States of America as represented by the Secretary of Agriculture, Washington, DC, United States (U.S. government)
PI US 5837825 19981117
AI US 1997-829026 19970331 (8)
RLI Continuation of Ser. No. US 1993-150305, filed on 12 Nov 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.
LREP Silverstein, M. Howard, Fado, John, Graeter, Janelle S.

CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 76 OF 92 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a basal body rod protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the basal body rod protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlgF or FlgG proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.
AN 1998:131534 USPATFULL
TI Basal body rod protein genes of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA University of Toronto, Toronto, United States (non-U.S. corporation)
PI US 5827654 19981027
AI US 1995-436748 19950508 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1257
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 77 OF 92 USPATFULL
AB The invention provides methods and compositions for inducing and maintaining tolerance to epitopes or antigens containing the epitopes. The compositions include expression cassettes and vectors including DNA sequences coding for a fusion immunoglobulin operably linked to transcriptional and translational control regions functional in a hemopoietic or lymphoid cell. The fusion immunoglobulin includes at least one heterologous tolerogenic epitope at the N-terminus variable region of the immunoglobulin. Cells stably transformed with the expression vector are formed and used to produce fusion immunoglobulin. The invention also provides methods for screening for novel tolerogenic epitopes and for inducing and maintaining tolerance. The methods of the invention are useful in the diagnosis and treatment of autoimmune or allergic immune responses.
AN 1998:122069 USPATFULL
TI Tolerogenic fusion proteins of immunoglobulins and methods for inducing and maintaining tolerance
IN Scott, David W., Pittsford, NY, United States
Zambidis, Elias T., Rochester, NY, United States
PA University of Rochester, Rochester, NY, United States (U.S. corporation)
PI US 5817308 19981006
AI US 1994-195874 19940211 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Low, Christopher S. F.
LREP Morrison & Foerster
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1520
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 78 OF 92 USPATFULL

AB Methods and compositions for the prevention, treatment and diagnosis of Lyme disease. Novel B. burgdorferi polypeptides, serotypic variants thereof, fragments thereof and derivatives thereof. Fusion proteins and multimeric proteins comprising same. Multicomponent vaccines comprising novel B. burgdorferi polypeptides in addition to other immunogenic B. burgdorferi polypeptides. DNA sequences, recombinant DNA molecules and transformed host cells useful in the compositions and methods. Antibodies directed against the novel B. burgdorferi polypeptides, and diagnostic kits comprising the polypeptides or antibodies.

AN 1998:111773 USPATFULL

TI OspE, OspF, and S1 polypeptides in Borrelia burgdorferi

IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Lam, Tuan T., San Jose, CA, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States

PA Yale University, New Haven, CT, United States (U.S. corporation)

PI US 5807685 19980915

AI US 1997-909119 19970811 (8)

RLI Division of Ser. No. US 1993-118469, filed on 8 Sep 1993, now patented, Pat. No. US 5656451 And a continuation-in-part of Ser. No. US 1993-99757, filed on 30 Jul 1993, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Carlson, Karen

LREP Fish & Neave, Haley, Jr., James F., Gunnison, Jane T.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN 17 Drawing Figure(s); 16 Drawing Page(s)

LN.CNT 2343

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 79 OF 92 USPATFULL

AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyme disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.

AN 1998:48213 USPATFULL

TI Compositions and methods for the prevention and diagnosis of lyme disease

IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States

PA Yale University, New Haven, CT, United States (U.S. corporation)

PI US 5747294 19980505

AI US 1994-320161 19941007 (8)

RLI Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Loring, Susan A.

LREP Fish & Neave, Haley, Jr., Esq., James F., Gunnison, Esq., Jane T.

CLMN Number of Claims: 9
ECL Exemplary Claim: 3
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2461
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 80 OF 92 USPATFULL
AB The invention relates to conjugates of poorly immunogenic antigens, e.g. peptides, proteins and polysaccharides, with a synthetic peptide carrier constituting a T cell epitope derived from the sequence of human heat shock protein hsp65, or an analog thereof, said peptide or analog being capable of increasing substantially the immunogenicity of the poorly immunogenic antigen. Suitable peptides according to the invention are Pep278h, which corresponds to positions 458-474 of human hsp65, and Pep II, which corresponds to positions 437-448 of human hsp65, but in which two cysteine residues at positions 442 and 447 are replaced serine residues.
AN 1998:36365 USPATFULL
TI Conjugates of poorly immunogenic antigens and synthetic peptide carriers and vaccines comprising them
IN Cohen, Irun R., Rehovot, Israel
Fridkin, Matityahu, Rehovot, Israel
Konen-Waisman, Stephanie, Tel Aviv, Israel
PA Yeda Research and Development Co. Ltd., Israel (non-U.S. corporation)
PI US 5736146 19980407
WO 9403208 19940217
AI US 1995-379613 19950222 (8)
WO 1993-US7096 19930728
19950222 PCT 371 date
19950222 PCT 102(e) date
PRAI IL 1992-102687 19920730
DT Utility
FS Granted
EXNAM Primary Examiner: Woodward, Michael P.
LREP Pennie & Edmonds
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 49 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 1401
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 81 OF 92 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Campylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 97:115125 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Dr., Toronto, Ontario, Canada M6B 1A6
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto, Ontario, Canada M3A 1H8
PI US 5695960 19971209
AI US 1995-485216 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Hendricks, Keith D.; Assistant Examiner: Saidha, Tekchand
LREP Bereskin & Parr
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 6 Drawing Page(s)

LN.CNT 1609
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 82 OF 92 USPATFULL
AB Methods and compositions for the prevention, treatment and diagnosis of Lyme disease. Novel B. burgdorferi polypeptides, serotypic variants thereof, fragments thereof and derivatives thereof. Fusion proteins and multimeric proteins comprising same. Multicomponent vaccines comprising novel B. burgdorferi polypeptides in addition to other immunogenic B. burgdorferi polypeptides. DNA sequences, recombinant DNA molecules and transformed host cells useful in the compositions and methods. Antibodies directed against the novel B. burgdorferi polypeptides, and diagnostic kits comprising the polypeptides or antibodies.
AN 97:70893 USPATFULL
TI OspE, OspF, and S1 polypeptides in borrelia burgdorferi
IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Lam, Tuan T., San Jose, CA, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5656451 19970812
AI US 1993-118469 19930908 (8)
RLI Continuation-in-part of Ser. No. US 1993-99757, filed on 30 Jul 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Carlson, K. Cochrane
LREP Fish & Neave, Haley, Jr. Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2447
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 83 OF 92 USPATFULL
AB An isolated nucleic acid molecule comprising the agfA gene of **Salmonella**. Methods and compositions suitable for diagnostic tests utilizing the isolated gene, and protein therefrom, to give highly specific diagnostic assays to **Salmonella**, and/or enteropathogenic bacteria of the family Enterobacteriaceae.
AN 97:47521 USPATFULL
TI Methods and compositions comprising the agfA gene for detection of **Salmonella**
IN Doran, James L., Brentwood Bay, Canada
Kay, William W., Victoria, Canada
Collinson, S. Karen, Brentwood Bay, Canada
Clouthier, Sharon C., Naniamo, Canada
PA University of Victoria Innovation & Development Corp., Victoria, Canada (non-U.S. corporation)
PI US 5635617 19970603
AI US 1994-233788 19940426 (8)
RLI Continuation-in-part of Ser. No. US 1993-54452, filed on 26 Apr 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Campbell, Eggerton A.
LREP Seed and Berry LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 26 Drawing Figure(s); 22 Drawing Page(s)
LN.CNT 3934
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 84 OF 92 USPATFULL
AB Provided by the present invention are novel methods of detecting ligand interactions, as well as regents useful in the method, including DNA and host cells; and more specifically relates to novel methods for the detection of protein/protein interactions and their application in epitope mapping and the study of ligand/receptor interactions. Also provided are vaccines and kits comprising the expression products and host cells of the invention.
AN 97:47098 USPATFULL
TI Method of detecting ligand interactions
IN McCoy, John M., Reading, MA, United States
Lu, Zhijian, Arlington, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 5635182 19970603
AI US 1994-260582 19940616 (8)
DCD 20101214
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Bugalsky, Gabriele E.
LREP Meinert, M. C.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1935
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 85 OF 92 USPATFULL
AB Diagnostic means and methods for Lyme disease comprising B. burgdorferi **flagellin** polypeptides and antibodies. Compositions and methods comprising neuroborreliosis-associated antigens useful for the detection, treatment and prevention of neuroborreliosis, arthritis, carditis and other manifestations of Lyme disease.
AN 97:29199 USPATFULL
TI **Flagellin**-based polypeptides for the diagnosis of lyme disease
IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Berland, Robert, Kingston, NY, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5618533 19970408
AI US 1993-166160 19931210 (8)
RLI Continuation of Ser. No. US 1992-837193, filed on 11 Feb 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Minnifield, N. M.
LREP Fish & Neave, Haley, Jr., Esq., James F., Kanter, Esq., Madge r.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1178

L6 ANSWER 86 OF 92 USPATFULL
AB Chimeric DNA fragments are provided which include a nucleotide sequence substantially the same as that which codes for the HA surface protein of an influenza A virus having five immunodominant antigenic sites, wherein a nucleotide sequence substantially the same as that which codes for a foreign epitope is inserted into the nucleotide sequence of an antigenic site. Corresponding chimeric peptides, expression vectors, and transformed hosts are provided as well. These peptides are useful in providing vaccines against the respective antigens and in test kits to

detect the exposure to such antigens. Additionally, these peptides or their corresponding antibodies are useful in methods of treatment and prevention of the manifestations of exposure to these antigens, including immunotherapy.

AN 97:1542 USPATFULL
TI Expression of specific immunogens using viral antigens
IN Hung, Paul P., Bryn Mawr, PA, United States
Lee, Shaw-Guang L., Villanova, PA, United States
Kalyan, Narender K., Wayne, PA, United States
PA American Home Products Corporation, Madison, NJ, United States (U.S. corporation)
PI US 5591823 19970107
AI US 1993-169813 19931217 (8)
RLI Continuation-in-part of Ser. No. US 1991-805105, filed on 11 Dec 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Smith, Lynette F.
LREP Jackson, Richard K.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 87 OF 92 USPATFULL
AB This invention relates to flagella-less strains of Borrelia to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.

AN 96:116113 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio G., Newbury Park, CA, United States
Sadziene, Adriadna, San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5585102 19961217
AI US 1993-124290 19930920 (8)
RLI Continuation of Ser. No. US 1991-641143, filed on 11 Jan 1991
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Arnold, White & Durkee
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1434

L6 ANSWER 88 OF 92 USPATFULL
AB The present invention provides a polypeptide that is non-toxic in E. coli. The disclosed polypeptide comprises at least one antigenic sequence present in P.IA of N. gonorrhoeae and at least one antigenic

sequence present in P.IB of N. gonorrhoeae. Further, the disclosed polypeptide of the invention is fused to a carrier peptide.

AN 96:75121 USPATFULL
TI Recombinant hybrid porin epitopes
IN Goldstein, Neil I., West Orange, NJ, United States
Tackney, Charles T., Brooklyn, NY, United States
PA Imclone Systems Incorporated, New York, NY, United States (U.S. corporation)
PI US 5547670 19960820
AI US 1993-124369 19930920 (8)
RLI Continuation of Ser. No. US 1991-669528, filed on 14 Mar 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Nucker, Christine M.; Assistant Examiner: Scheiner, Laurie
LREP Feit, Irving N., Gallagher, Thomas C.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 985
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 89 OF 92 USPATFULL
AB This invention relates to flagella-less strains of Borrelia and to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.

AN 95:66995 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio, San Antonio, TX, United States
PA University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5436000 19950725
AI US 1991-641143 19910111 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Arnold, White & Durkee
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1300

L6 ANSWER 90 OF 92 USPATFULL
AB The present invention is concerned with vaccine for combating Treponema hyodysenteriae infection in swine containing proteins or polypeptides typical of the hemolysin protein of Treponema hyodysenteriae or containing recombinant polynucleotides having as part thereof a polynucleotide coding for said protein or polypeptide, and also is concerned with the preparation of said proteins, polypeptides and polynucleotides.

AN 94:99829 USPATFULL

TI Treponema hyodysenteriae vaccine
IN Muir, Susie Jane, Weesp, Netherlands
Koopman, Marcel B. H., Weesp, Netherlands
Kusters, Johannes G., Weesp, Netherlands
PA Duphar International Research B.V., Weesp, Netherlands (non-U.S. corporation)
PI US 5364774 19941115
AI US 1992-965668 19921021 (7)
PRAI NL 1991-202766 19911025
NL 1992-202274 19920724
DT Utility
FS Granted
EXNAM Primary Examiner: Ellis, Joan
LREP Stevens, Davis, Miller & Mosher
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 962
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 91 OF 92 USPATFULL
AB The invention relates to nucleic acid segments useful in the construction of expression vectors for expression of heterologous polypeptides directed to particular areas of the host cell. Selected constructs direct production of polypeptides to the outer membrane surface of the cell. Other constructs direct expression of heterologous polypeptides to the inner membrane/periplasm of the host cell. Transformed host cells are potentially useful for the production of vaccines or immunogens elicited in response to antigens expressed on the outer membranes of the host cells.
AN 94:90955 USPATFULL
TI Membrane expression of heterologous genes
IN Niesel, David W., League City, TX, United States
Moncrief, J. Scott, Galveston, TX, United States
Phillips, Linda H., Galveston, TX, United States
PA Board of Regents, The University of Texas, Austin, TX, United States (U.S. corporation)
PI US 5356797 19941018
AI US 1991-792525 19911115 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Schwartz, Richard A.; Assistant Examiner: Guzo, David
LREP Arnold, White & Durkee
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 92 OF 92 USPATFULL
AB The invention relates to a DNA segment encoding a Borrelia burgdorferi antigenic polypeptide. The invention also relates to a purified 30 kDa polypeptide isolated from a virulent strain of B. burgdorferi and to epitopic segments of the polypeptide with immunogenic potential. The 30 kDa protein provides a route for the development of immunodiagnostics for Lyme disease and related disorders. The 30 kDa protein and related amino acid and DNA sequences may also be used for the **immunization**, for the detection of B. burgdorferi in human or animal tissues or body fluids, and also for the generation of specific antibodies for use in diagnosis, epidemiology, and prevention of Lyme disease.
AN 93:78691 USPATFULL
TI Virulence associated proteins in Borrelia burgdorferi (BB)
IN Norris, Steven J., Houston, TX, United States

Barbour, Alan G., San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5246844 19930921
AI US 1991-781355 19911022 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Nucker, Christine M.; Assistant Examiner: Dubrule, Chris
LREP Arnold, White & Durkee
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1705
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>
=>

46 ANSWER 3 OF 4 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 2

AB Improved live oral typhoid fever vaccines may be engineered by deletion of Salmonella specific virulence genes in Salmonella **typhi**. Ty445, an aroA-deleted S. **typhi** Ty2 strain also deleted for the phoP/phoQ Salmonella typhimurium virulence regulatory locus, was tested in human volunteers. Volunteers received escalating single doses of the vaccine; subsequently 14 individuals received two doses of 10 super(10) c.f.u. without significant side-effects. Control vaccines received four doses of the live oral typhoid vaccine Ty21a. Of controls, 5/8 seroconverted as measured by increases in serum IgG directed against S. **typhi** O antigen or whole bacterial antigens in ELISAs. Only 2/14 volunteers receiving the experimental vaccine Ty445 seroconverted. Although a Delta aroA Delta phoP/phoQ S. **typhi** strain is overattenuated for use as a typhoid fever vaccine, our data demonstrate that the deletion of the phoP/phoQ locus in S. **typhi** significantly **attenuates** this human pathogen.

AN 96:47709 LIFESCI

TI Evaluation of a phoP/phoQ-deleted aroA-deleted live oral Salmonella **typhi** vaccine strain in human volunteers

AU Hohmann, E.L.; Oletta, C.A.; Miller, S.I.

CS Infect. Dis. Unit, Gray 5, Massachusetts General Hosp., Fruit St., Boston, MA 02114, USA

SO VACCINE, (1996) vol. 14, no. 1, pp. 19-24.
ISSN: 0264-410X.

DT Journal

FS J; F; W3

LA English

SL English

virulence for use in teaching and proficiency testing.
AU Hickman, F.W.; Rhoden, D.L.; Esaias, A.O.; Baron, L.S.; Brenner, D.J.; Farmer, J.J.,III
CS Enteric Sect., Cent. Infect. Dis., Cent. Dis. Control, Atlanta, GA 30333, USA
SO J. CLIN. MICROBIOL., (1982) vol. 15, no. 6, pp. 1085-1091.
DT Journal
FS J
LA English
SL English

L29 ANSWER 7 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Three batches of S. **typhi** strains subjected to a complementary phage typing scheme. The scheme was useful for the identification of Vi-phage types of Vi-negative strains isolated at Bangalore and Kurnool. A Vi-negative strain, identified as phage type JI by the complementary phage typing scheme, was found to be connected to an outbreak [in humans] caused by the same phage type. The **nonmotile**, Vi-negative strains from Kurnool, provisionally identified as S. **typhi**, were typed by the scheme as subtype Chamblee, phage type A of S. **typhi**. The epidemiological correlation between Vi-negative strains and the Vi-phage types of S. **typhi** was discussed.
AN 1982:219218 BIOSIS
DN BA73:79202
TI EPIDEMIOLOGICAL INVESTIGATIONS ON VI NEGATIVE STRAINS OF SALMONELLA-**TYPHI** ISOLATED FROM BANGALORE AND KURNOOL IN SOUTHERN INDIA.
AU SOMASEKHAR G; SHARMA K B
CS SALMONELLA PHAGE TYPING CENT., DEP. MICROBIOL., LADY HARDINAGE MED. COLL., NEW DELHI 110001.
SO INDIAN J MED RES, (1981) 73 (JUNE), 832-835.
CODEN: IJMRAQ. ISSN: 0019-5340.
FS BA; OLD
LA English

L29 ANSWER 8 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB A controlled field trial was performed in Egypt to evaluate a whole cell typhoid vaccine prepared with a **nonmotile** mutant of S. **typhi** Ty2 (TNM1) devoid of flagellar antigen. This vaccine did not elicit an H antibody response, but significant Vi and O agglutinin responses were observed. There were 34 typhoid cases among 21,063 6-7-yr-old children who received the TNM1 vaccine, and 44 cases among 21,017 children in the control group who received tetanus toxoid. TNM1 vaccine probably does not provide protection against typhoid fever. H antigen may be an important component of an effective vaccine.
AN 1976:172204 BIOSIS
DN BA62:2204
TI CONTROLLED FIELD TRIAL OF A TYPHOID VACCINE PREPARED WITH A **NONMOTILE** MUTANT OF SALMONELLA-**TYPHI** TY-2.
AU WAHDAN M H; SIPPEL J E; MIKHAIL I A; RAHKA A E; ANDERSON E S; SPARKS H A; CVJETANOVIC B
SO BULL W H O, (1975 (RECD 1976)) 52 (1), 69-73.
CODEN: BWHOA6. ISSN: 0366-4996.
FS BA; OLD
LA Unavailable

L29 ANSWER 9 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1972:10919 BIOSIS
DN BR08:10919
TI PROPOSED USE OF A **NONMOTILE** VARIANT OF SALMONELLA-**TYPHI** FOR THE PREPARATION OF VACCINE AGAINST TYPHOID FEVER.
AU ANDERSON E S
SO REGAMEY, R.H., M. STANIC AND J. UNGER (EDITED BY). SYMPOSIA SERIES IN IMMUNOBIOLOGICAL STANDARDIZATION, VOL. 15. INTERNATIONAL SYMPOSIUM ON ENTEROBACTERIAL VACCINES. SYMPOSIUM. VIII+296P. ILLUS. S. KARGER: BASEL,

L41 ANSWER 62 OF 79 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 32
AN 93:18161 LIFESCI
TI Clinical acceptability and immunogenicity of CVD 908 Salmonella **typhi** vaccine strain.
AU Tacket, C.O.; Hone, D.M.; Losonsky, G.A.; Guers, L.; Edelman, R.; Levine, M.M.
CS Cent. Vaccine Dev., Div. Geogr. Med., Dep. Med., Univ. Maryland Sch. Med., Baltimore, MD 21201, USA
SO VACCINE., (1992) vol. 10, no. 7, pp. 443-446.
DT Journal
FS J; F
LA English
SL English

L4 ANSWER 1 OF 177 USPATFULL

AB The invention relates to the finding that virus like particles (VLPs) can be loaded with immunostimulatory substances, in particular with DNA oligonucleotides containing non-methylated C and G (CpGs). Such CpG-VLPs are dramatically more immunogenic than their CpG-free counterparts and induce enhanced B and T cell responses. The immune response against antigens optionally coupled, fused or attached otherwise to the VLPs is similarly enhanced as the immune response against the VLP itself. In addition, the T cell responses against both the VLPs and antigens are especially directed to the Th1 type. Antigens attached to CpG-loaded VLPs may therefore be ideal vaccines for prophylactic or therapeutic vaccination against allergies, tumors and other self-molecules and chronic viral diseases.

AN 2003:145924 USPATFULL

TI Packaging of immunostimulatory substances into virus-like particles: method of preparation and use

IN Bachmann, Martin, Winterthur, SWITZERLAND
Storni, Tazio, Viganello, SWITZERLAND
Maurer, Patrik, Winterthur, SWITZERLAND
Tissot, Alain, Zurich, SWITZERLAND
Schwarz, Katrin, Schlieren, SWITZERLAND
Meijerink, Edwin, Zurich, SWITZERLAND
Lipowsky, Gerd, Zurich, SWITZERLAND
Pumpens, Paul, Riga, LATVIA
Cielens, Indulis, Riga, LATVIA
Renhofa, Regina, Riga, LATVIA

PA Cytos Biotechnology AG (non-U.S. corporation)

PI US 2003099668 A1 20030529

AI US 2002-244065 A1 20020916 (10)

PRAI US 2001-318994P 20010914 (60)
US 2002-374145P 20020422 (60)

DT Utility

FS APPLICATION

LREP STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934

CLMN Number of Claims: 207

ECL Exemplary Claim: 1

DRWN 60 Drawing Page(s)

LN.CNT 7907

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 177 USPATFULL

AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the detection of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.

AN 2003:134814 USPATFULL

TI VMP-like sequences of pathogenic Borrelia

IN Norris, Steven J., Houston, TX, UNITED STATES
Zhang, Jing-Ren, Delmar, NY, UNITED STATES
Hardham, John M., Gales Ferry, CT, UNITED STATES
Howell, Jerrilyn K., Houston, TX, UNITED STATES
Barbour, Alan G., Newport Beach, CA, UNITED STATES
Weinstock, George M., Houston, TX, UNITED STATES

PA Board of Regents, The University of Texas System (U.S. corporation)

PI US 2003092903 A1 20030515

AI US 2002-143024 A1 20020731 (10)

RLI Division of Ser. No. US 1999-125619, filed on 27 Jan 1999, GRANTED, Pat.

No. US 6437116 Continuation of Ser. No. WO 1997-US2952, filed on 20 Feb 1997, PENDING
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS APPLICATION
LREP Mark B. Wilson, FULBRIGHT & JAWORSKI L.L.P., Suite 2400, 600 Congress Avenue,. Austin, TX, 78701
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 5170
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 177 USPATFULL
AB The invention relates to the finding that stimulation of antigen presenting cell (APC) activation using substances such as anti-CD40 antibodies or DNA oligomers rich in non-methylated C and G (CpGs) can dramatically enhance the specific T cell response obtained after vaccination with recombinant virus like particles (VLPs) coupled, fused or otherwise attached to antigens. While vaccination with recombinant VLPs fused to a cytotoxic T cell (CTL) epitope of lymphocytic choriomeningitis virus induced low levels cytolytic activity only and did not induce efficient anti-viral protection, VLPs injected together with anti-CD40 antibodies or CpGs induced strong CTL activity and full anti-viral protection. Thus, stimulation of APC-activation through antigen presenting cell activators such as anti-CD40 antibodies or CpGs can exhibit a potent adjuvant effect for vaccination with VLPs coupled, fused or attached otherwise to antigens.
AN 2003:133508 USPATFULL
TI In vivo activation of antigen presenting cells for enhancement of immune responses induced by virus like particles
IN Bachmann, Martin F., Winterthur, SWITZERLAND
Lechner, Franziska, Zurich, SWITZERLAND
Storni, Tazio, Viganello, SWITZERLAND
PA Cytos Biotechnology AG (non-U.S. corporation)
PI US 2003091593 A1 20030515
AI US 2002-243739 A1 20020916 (10)
PRAI US 2001-318967P 20010914 (60)
DT Utility
FS APPLICATION
LREP STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W.,. SUITE 600, WASHINGTON, DC, 20005-3934
CLMN Number of Claims: 194
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 6522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 177 USPATFULL
AB The invention relates to a pharmaceutical composition comprising a chimeric, folded protein domain comprising two or more sequence segments from parent amino acid sequences that are not homologous. The invention more particularly relates to compositions comprising a chimeric, folded protein domain comprising two or more sequence segments wherein each of the sequence segments: is not designed or selected to consist solely of a single complete protein structural element and is not designed or selected to consist solely of an entire protein domain; and, in isolation, shows no significant folding at the melting temperature of the chimeric protein. The invention also relates to methods for the selection of such protein domains, and to methods of raising an immune response using such domains, and preferably to chimeric domains that display conformational B cell epitopes of at least one of their parent amino acid sequences.
AN 2003:113451 USPATFULL

TI Combinatorial protein domains
IN Winter, Gregory Paul, Cambridge, UNITED KINGDOM
Riechmann, Lutz, Cambridge, UNITED KINGDOM
PI US 2003078192 A1 20030424
AI US 2002-119556 A1 20020410 (10)
RLI Continuation-in-part of Ser. No. US 2001-938945, filed on 24 Aug 2001, PENDING Continuation-in-part of Ser. No. WO 2001-GB445, filed on 2 Feb 2001, UNKNOWN
PRAI GB 2000-2492 20000203
GB 2000-19362 20000807
GB 2000-16346 20000703
US
DT Utility
FS APPLICATION
LREP PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199
CLMN Number of Claims: 79
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 4574
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 177 USPATFULL
AB The invention provides Helicobacter polypeptides that can be used in vaccination methods for preventing or treating Helicobacter infection, and polynucleotides that encode these polypeptides.
AN 2003:100293 USPATFULL
TI Helicobacter antigens and corresponding DNA fragments
IN Haas, Rainer, Tuebingen, GERMANY, FEDERAL REPUBLIC OF
Kleanthous, Harold, Newtonville, MA, UNITED STATES
Meyer, Thomas F., Tuebingen, GERMANY, FEDERAL REPUBLIC OF
Odenbreit, Stefan, Ammerbuch, GERMANY, FEDERAL REPUBLIC OF
Al-Garawi, Amal A., Boston, MA, UNITED STATES
Miller, Charles A., Medford, MA, UNITED STATES
PI US 2003069404 A1 20030410
AI US 2001-13315 A1 20011105 (10)
RLI Continuation of Ser. No. US 1996-749051, filed on 14 Nov 1996, ABANDONED
DT Utility
FS APPLICATION
LREP CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 42 Drawing Page(s)
LN.CNT 4832
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 177 USPATFULL
AB Disclosed herein methods for producing live attenuated **Salmonella** typhi, **Salmonella** paratyphi A and B and other **Salmonella** mutants which can be used in vaccines to prevent diseases caused by **Salmonella** infection. These mutants can also be used to prevent or treat diseases caused by other bacterial strains, by viral and parasitic pathogens and by tumor cells.
AN 2003:99224 USPATFULL
TI Live attenuated **salmonella** strains for producing monovalent or multivalent vaccines
IN Vladoianu, Ion R., Cologny, SWITZERLAND
Berdoz, Jose A., Chernex, SWITZERLAND
PI US 2003068328 A1 20030410
AI US 2001-11960 A1 20011105 (10)
PRAI US 2001-327472P 20011004 (60)
DT Utility
FS APPLICATION
LREP MINTZ, LEVIN, COHN, FERRIS, GLOVSKY and POPEO, P.C, One Financial

Center, Boston, MA, 02111
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 177 USPATFULL
AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the detection of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.
AN 2003:87010 USPATFULL
TI VMP-like sequences of pathogenic Borrelia
IN Norris, Steven J., Houston, TX, UNITED STATES
Zhang, Jing-Ren, Delmar, NY, UNITED STATES
Hardham, John M., Gales Ferry, CT, UNITED STATES
Howell, Jerrilyn K., Houston, TX, UNITED STATES
Barbour, Alan G., Newport Beach, CA, UNITED STATES
Weinstock, George M., Houston, TX, UNITED STATES
PA Board of Regents, The University of Texas System (U.S. corporation)
PI US 2003060618 A1 20030327
AI US 2002-222162 A1 20020816 (10)
RLI Division of Ser. No. US 1999-125619, filed on 27 Jan 1999, GRANTED, Pat. No. US 6437116 Continuation of Ser. No. WO 1997-US2952, filed on 20 Feb 1997, PENDING
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS APPLICATION
LREP Thomas M. Boyce, Esq., FULBRIGHT & JAWORSKI L.L.P., 600 Congress Avenue, Suite 2400, Austin, TX, 78701
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 5175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 177 USPATFULL
AB The present invention provides polynucleotide sequences of the genome of Staphylococcus aureus, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and assays and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use.
AN 2003:78516 USPATFULL
TI STAPHYLOCOCCUS AUREUS POLYNUCLEOTIDES AND SEQUENCES
IN KUNSCH, CHARLES A., GAITHERSBURG, MD, UNITED STATES
CHOI, GIL A., ROCKVILLE, MD, UNITED STATES
BARASH, STEVEN C., ROCKVILLE, MD, UNITED STATES
DILLON, PATRICK J., GAITHERSBURG, MD, UNITED STATES
FANNON, MICHAEL R., SILVER SPRING, MD, UNITED STATES
ROSEN, CRAIG A., LAYTONSVILLE, MD, UNITED STATES
PI US 2003054436 A1 20030320
AI US 1997-781986 A1 19970103 (8)
PRAI US 1996-9861P 19960105 (60)
DT Utility

FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 13414
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 177 USPATFULL
AB A method is provided for the identification of polymorphic markers in a population. The method includes genotypically characterizing a first sample of a population, selecting one or more individuals of the first sample based upon the genotypic characterization, fabricating a microarray with genomic DNA from each individual selected, and genotyping a second sample of the population using each fabricated microarray as a reference, thereby identifying the polymorphic markers in the population. Also provided is a method for the identification of polymorphic markers in a bacterial population. The method includes phenotypically characterizing a first sample of a population, selecting one or more individuals of the first sample based upon the phenotypic characterization, fabricating a microarray with genomic DNA from each individual selected, and genotyping a second sample of the population using each fabricated microarray as a reference, thereby identifying the polymorphic markers in the population. Also provided is a method for identifying unique bits among a plurality of bit strings including providing a plurality of bit strings, wherein each string has the same number and position of bits, and each bit has a value of 0 or 1, generating a graphical representation--including selectable elements--representing the relatedness of the bit strings, making a selection of a first selectable element, making a selection of a second selectable element, and identifying bits that are present in each bit string represented by the first selectable element and absent in each bit string represented by the second selectable element, or vice-versa.
AN 2003:70650 USPATFULL
TI Method for identifying polymorphic markers in a population
IN Benson, Andrew K., Lincoln, NE, UNITED STATES
PI US 2003048934 A1 20030313
AI US 2001-945564 A1 20010831 (9)
DT Utility
FS APPLICATION
LREP SONNENSCHEIN, NATH & ROSENTHAL, Suite 1500, 601 South Figueroa Street, Los Angeles, CA, 90017
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1061

L4 ANSWER 10 OF 177 USPATFULL
AB The invention provides an immunomodulatory **flagellin** peptide having at least about 10 amino acids of substantially the amino acid sequence GAVQNRFNSAIT, or a modification thereof, and having toll-like receptor 5 (TLR5) binding. Methods of inducing an immune response are also provided.
AN 2003:64309 USPATFULL
TI Toll-like receptor 5 ligands and methods of use
IN Aderem, Alan, Seattle, WA, UNITED STATES
Hayashi, Fumitaka, North Quincy, MA, UNITED STATES
Smith, Kelly D., Seattle, WA, UNITED STATES
Underhill, David M., Seattle, WA, UNITED STATES
Ozinsky, Adrian, Seattle, WA, UNITED STATES
PI US 2003044429 A1 20030306
AI US 2002-125692 A1 20020417 (10)
PRAI US 2001-285477P 20010420 (60)
DT Utility

FS APPLICATION
LREP CATHRYN CAMPBELL, CAMPBELL & FLORES LLP, 7th Floor, 4370 La Jolla Village Drive, San Diego, CA, 92122
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 15 Drawing Page(s)
LN.CNT 4238
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 177 USPATFULL
AB The invention relates to methods of selecting proteins, out of large libraries, having desirable characteristics. Exemplified are methods of expressing enzymes and antibodies on the surface of host cells and selecting for desired activities. These methods have the advantage of speed and ease of operation when compared with current methods. They also provide, without additional cloning, a source of significant quantities of the protein of interest.
AN. 2003:51135 USPATFULL
TI Directed evolution of enzymes and antibodies
IN Iverson, Brent, Austin, TX, UNITED STATES
Georgiou, George, Austin, TX, UNITED STATES
Chen, Gang, Austin, TX, UNITED STATES
Olsen, Mark J., Austin, TX, UNITED STATES
Daugherty, Patrick S., Austin, TX, UNITED STATES
PA Board of Regents, The University of Texas System (U.S. corporation)
PI US 2003036092 A1 20030220
AI US 2001-782672 A1 20010212 (9)
RLI Continuation of Ser. No. US 1997-847063, filed on 1 May 1997, ABANDONED Continuation-in-part of Ser. No. US 1995-447402, filed on 23 May 1995, GRANTED, Pat. No. US 5866344 Continuation-in-part of Ser. No. US 1994-258543, filed on 10 Jun 1994, ABANDONED Division of Ser. No. US 1991-794731, filed on 15 Nov 1991, GRANTED, Pat. No. US 5348867
DT Utility
FS APPLICATION
LREP Steven L. Highlander, Esq., FULBRIGHT & JAWORSKI L.L.P., Suite 2400, 600 Congress Avenue, Austin, TX, 78701
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 3955
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 177 USPATFULL
AB The entire genome of pathogenic E. coli strain 0157:H7 has been sequenced. All of the genomic DNA sequences present in 0157 and absent in the previously sequenced laboratory strain K12 are presented here.
AN 2003:31124 USPATFULL
TI Novel sequences of E. coli O157
IN Blattner, Frederick R., Madison, WI, UNITED STATES
Burland, Valerie D., Cross Plains, WI, UNITED STATES
Perna, Nicole T., Madison, WI, UNITED STATES
Plunkett, Guy, III, Madison, WI, UNITED STATES
Welch, Rod, Madison, WI, UNITED STATES
PI US 2003023075 A1 20030130
AI US 2002-114170 A1 20020401 (10)
RLI Continuation of Ser. No. US 1999-453702, filed on 3 Dec 1999, GRANTED, Pat. No. US 6365723
PRAI US 1998-110955P 19981204 (60)
DT Utility
FS APPLICATION
LREP QUARLES & BRADY LLP, FIRSTAR PLAZA, ONE SOUTH PINCKNEY STREET, P.O. BOX 2113 SUITE 600, MADISON, WI, 53701-2113
CLMN Number of Claims: 18
ECL Exemplary Claim: 1

DRWN No Drawings
LN.CNT 2155
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 177 USPATFULL
AB The invention provides Helicobacter polypeptides that can be used in vaccination methods for preventing or treating Helicobacter infection, and polynucleotides that encode these polypeptides.
AN 2003:31115 USPATFULL
TI HELICOBACTER POLYPEPTIDES AND CORRESPONDING POLYNUCLEOTIDE MOLECULES
IN HAAS, RAINER, TUEBINGEN, GERMANY, FEDERAL REPUBLIC OF
KLEANTHOUS, HAROLD, NEWTONVILLE, MA, UNITED STATES
TOMB, JEAN-FRANCOIS, BALTIMORE, MD, UNITED STATES
MILLER, CHARLES, MEDFORD, MA, UNITED STATES
AL-GARAWI, AMAL, BOSTON, MA, UNITED STATES
ODENBREIT, STEFAN, AMMERBUCH, GERMANY, FEDERAL REPUBLIC OF
MEYER, THOMAS, TUEBINGEN, GERMANY, FEDERAL REPUBLIC OF
PI US 2003023066 A1 20030130
AI US 1997-834705 A1 19970401 (8)
RLI Continuation-in-part of Ser. No. US 1996-749051, filed on 14 Nov 1996, ABANDONED
DT Utility
FS APPLICATION
LREP PAUL T CLARK, CLARK AND ELBING, 176 FEDERAL STREET, BOSTON, MA, 021102223
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 4253
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 177 USPATFULL
AB The present invention relates, in general, to the use of synthetic peptides to induce tolerance to immunogenic peptides. In particular, the present invention relates to a method of inducing tolerance in a mammal to an immunogenic peptide or protein comprising administering to a mammal a synthetic toleragen comprising a hydrophobic peptide linked to the N-terminus or C-terminus of the immunogenic peptide or protein, under conditions such that the tolerance is induced.
AN 2003:30877 USPATFULL
TI Use of synthetic peptides to induce tolerance to pathogenic T and B cell epitopes of autoantigens or infectious agents
IN Haynes, Barton F., Durham, NC, UNITED STATES
PA DUKE UNIVERSITY (U.S. corporation)
PI US 2003022826 A1 20030130
AI US 2001-956940 A1 20010921 (9)
RLI Continuation of Ser. No. US 2000-635845, filed on 11 Aug 2000, ABANDONED Continuation of Ser. No. US 1995-460673, filed on 2 Jun 1995, ABANDONED Continuation of Ser. No. US 1993-15987, filed on 10 Feb 1993, ABANDONED Continuation-in-part of Ser. No. US 1992-833429, filed on 10 Feb 1992, ABANDONED Continuation-in-part of Ser. No. US 1990-591109, filed on 1 Oct 1990, ABANDONED Continuation-in-part of Ser. No. US 1987-93854, filed on 8 Sep 1987, GRANTED, Pat. No. US 5019387
DT Utility
FS APPLICATION
LREP Nixon & Vanderhye P.C., 8th Floor, 1100 N. Glebe Rd., Arlington, VA, 22201
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 1161
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 177 USPATFULL

AB The invention provides isolated polypeptide and nucleic acid sequences derived from Acinetobacter mirabilis that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.
AN 2003:130010 USPATFULL
TI Nucleic acid and amino acid sequences relating to Acinetobacter baumannii for diagnostics and therapeutics
IN Breton, Gary, Marlborough, MA, United States
Bush, David, Somerville, MA, United States
PA Genome Therapeutics Corporation, Waltham, MA, United States (U.S. corporation)
PI US 6562958 B1 20030513
AI US 1999-328352 19990604 (9)
PRAI US 1998-88701P 19980609 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Borin, Michael
LREP Genome Therapeutics Corporation
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 16618
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 177 USPATFULL
AB The invention provides isolated polypeptide and nucleic acid sequences derived from Pseudomonas aeruginosa that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.
AN 2003:108972 USPATFULL
TI Nucleic acid and amino acid sequences relating to pseudomonas aeruginosa for diagnostics and therapeutics
IN Rubenfield, Marc J., Framingham, MA, United States
Nolling, Jork, Ouincy, MA, United States
Deloughery, Craig, Medford, MA, United States
Bush, David, Somerville, MA, United States
PA Genome Therapeutics Corporation, Waltham, MA, United States (U.S. corporation)
PI US 6551795 B1 20030422
AI US 1999-252991 19990218 (9)
PRAI US 1998-74788P 19980218 (60)
US 1998-94190P 19980727 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Allen, Marianne P.
LREP Burns, Doane, Swecker & Mathis, L.L.P.
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 21431
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 177 USPATFULL
AB Fusion of the viral envelope, or infected cell membranes with uninfected cell membranes, is an essential step in the viral life cycle. Recent studies involving the human immunodeficiency virus type 1(HIV-1) demonstrated that synthetic peptides (designated DP-107 and DP-178) derived from potential helical regions of the transmembrane (TM) protein, gp41, were potent inhibitors of viral fusion and infection. A computerized antiviral searching technology (C.A.S.T.) that detects

related structural motifs (e.g., ALLMOTI 5, 107.times.178.times.4, and PLZIP) in other viral proteins was employed to identify similar regions in the Epstein-Barr virus (EBV). Several conserved heptad repeat domains that are predicted to form coiled-coil structures with antiviral activity were identified in the EBV genome. Synthetic peptides of 16 to 39 amino acids derived from these regions were prepared and their antiviral activities assessed in a suitable in vitro screening assay. These peptides proved to be potent inhibitors of EBV fusion. Based upon their structural and functional equivalence to the known HIV-1 inhibitors DP-107 and DP-178, these peptides should provide a novel approach to the development of targeted therapies for the treatment of EBV infections.

AN 2003:40533 USPATFULL
TI Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission
IN Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6518013 B1 20030211
AI US 1995-485546 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS GRANTED
EXNAM Primary Examiner: Scheiner, Laurie; Assistant Examiner: Parkin, Jeffrey S.
LREP Pennie & Edmonds LLP, Nelson, M. Bud
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 24700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 177 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.

AN 2003:20023 USPATFULL
TI 66 KDA antigen from Borrelia
IN Bergstrom, Sven, Umea, SWEDEN
Barbour, Alan George, Newport Beach, CA, United States
PA Symbicom Aktiebolog, Molndal, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6509017 B1 20030121
AI US 1995-470638 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994, now patented, Pat. No. US 6054296 Continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 Continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned Continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
PRAI DK 1919-590288 19191024

DT Utility
FS GRANTED
EXNAM Primary Examiner: Navarro, Mark; Assistant Examiner: Hines, Jana
LREP Frommer Lawrence & Haug, LLP, Frommer, William S., Kowalski, Thomas J.
CLMN Number of Claims: 43
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3305
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 177 USPATFULL
AB The present application describes selected polynucleotide sequence from the 1.66-megabase pair genome sequence of an autotrophic archaeon, Methanococcus jannaschii, and its 58- and 16-kilobase pair extrachromosomal elements.
AN 2003:6806 USPATFULL
TI Selected polynucleotide and polypeptide sequences of the methanogenic archaeon, methanococcus jannashii
IN Bult, Carol J., Bar Harbor, ME, United States
White, Owen R., Gaithersburg, MD, United States
Smith, Hamilton O., Baltimore, MD, United States
Woese, Carl R., Urbana, IL, United States
Venter, J. Craig, Rockville, MD, United States
PA The Board of Trustees of the University of Illinois, Urbana, IL, United States (U.S. corporation)
The Institute for Genomic Research, Rockville, MD, United States (U.S. corporation)
Johns Hopkins University, Baltimore, MD, United States (U.S. corporation)
PI US 6503729 B1 20030107
AI US 1997-916421 19970822 (8)
PRAI US 1996-24428P 19960822 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Schnizer, Richard
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 107
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 4244
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB **Salmonella** enterica subspecies 1 serovar Typhimurium is a principal cause of human enterocolitis. For unknown reasons, in mice serovar Typhimurium does not provoke intestinal inflammation but rather targets the gut-associated lymphatic tissues and causes a systemic typhoid-like infection. The lack of a suitable murine model has limited the analysis of the pathogenetic mechanisms of intestinal salmonellosis. We describe here how streptomycin-pretreated mice provide a mouse model for serovar Typhimurium colitis. Serovar Typhimurium colitis in streptomycin-pretreated mice resembles many aspects of the human infection, including epithelial ulceration, edema, induction of intercellular adhesion molecule 1, and massive infiltration of PMN/CD18(+) cells. This pathology is strongly dependent on protein translocation via the serovar Typhimurium SPH type III secretion system. Using a lymphotoxin beta-receptor **knockout** mouse strain that lacks all lymph nodes and organized gut-associated lymphatic tissues, we demonstrate that Peyer's patches and mesenteric lymph nodes are dispensable for the initiation of murine serovar Typhimurium colitis. Our results demonstrate that streptomycin-pretreated mice offer a unique infection model that allows for the first time to use mutants of both the pathogen and the host to study the molecular mechanisms of enteric salmonellosis.
AN 2003:374881 SCISEARCH

GA The Genuine Article (R) Number: 672BT
TI Pretreatment of mice with streptomycin provides a **Salmonella** enterica serovar typhimurium colitis model that allows analysis of both pathogen and host
AU Barthel M; Hapfelmeier S; Quintanilla-Martinez L; Kremer M; Rohde M; Hogardt M; Pfeffer K; Russmann H; Hardt W D (Reprint)
CS Swiss Fed Inst Technol, Inst Microbiol, Schmelzbergstr 7, CH-8092 Zurich, Switzerland (Reprint); Swiss Fed Inst Technol, Inst Microbiol, CH-8092 Zurich, Switzerland; Univ Munich, Max Von Pettenkofer Inst, D-80336 Munich, Germany; Tech Univ Munich, Inst Med Microbiol Immunol & Hyg, D-81675 Munich, Germany; Tech Univ Munich, Inst Pathol, D-81675 Munich, Germany; GSF, Res Ctr Environm & Hlth, D-85764 Neuherberg, Germany; GBF, D-38124 Braunschweig, Germany
CYA Switzerland; Germany
SO INFECTION AND IMMUNITY, (MAY 2003) Vol. 71, No. 5, pp. 2839-2858. Publisher: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904 USA.
ISSN: 0019-9567.
DT Article; Journal
LA English
REC Reference Count: 86
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 21 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 1
AB FlhB, an integral membrane protein, gates the type III flagellar export pathway of **Salmonella**. It permits export of rod/hook-type proteins before hook completion, whereupon it switches specificity to recognize filament-type proteins. The cytoplasmic C-terminal domain of FlhB (FlhBC) is cleaved between Asn-269 and Pro-270, defining two subdomains: FlhBCN and FlhBCC. Here, we show that subdomain interactions and cleavage within FlhB are central to substrate-specificity switching. We found that **deletions** between residues 216 and 240 of FlhBCN permitted FlhB cleavage but abolished function, whereas a **deletion** spanning Asn-269 and Pro-270 abolished both. The mutation N269A prevented cleavage at the Flh-BCN-FlhBCC boundary. Cells producing FlhB(N269A) exported the same amounts of hook-capping protein as cells producing wild-type FlhB. However, they exported no **flagellin**, even when the fliC gene was being expressed from a foreign promoter to circumvent regulation of expression by FlgM, which is itself a filament-type substrate. Electron microscopy revealed that these cells assembled polyhook structures lacking filaments. Thus, FlhB(N269A) is locked in a conformation specific for rod/hook-type substrates. With FlhB(P270A), cleavage was reduced but not abolished, and cells producing this protein were weakly motile, exported reduced amounts of **flagellin** and assembled polyhook filaments.
AN 2003:267214 BIOSIS
DN PREV200300267214
TI Substrate specificity of type III flagellar protein export in **Salmonella** is controlled by subdomain interactions in FlhB.
AU Fraser, Gillian M.; Hirano, Takanori; Ferris, Hedda U.; Devgan, Lara L.; Kihara, May; Macnab, Robert M. (1)
CS (1) Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT, 06520-8114, USA: robert.macnab@yale.edu USA
SO Molecular Microbiology, (May 2003, 2003) Vol. 48, No. 4, pp. 1043-1057. print.
ISSN: 0950-382X.
DT Article
LA English

L4 ANSWER 22 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Genetic determinants that co-operate with type 1 pili to mediate invasion were sought for in adherent-invasive Escherichia coli strain LF82 isolated from a patient with Crohn's disease. Two mutants selected for

their impaired ability to invade epithelial cells carried insertions of a TnphoA transposon within genes of the flagellar regulon. An isogenic mutant LF82-DeltafliC **deleted** for the **flagellin** -encoding gene did not adhere, did not invade and, surprisingly, expressed only a few type 1 pili. Type 1 pili downregulation resulted from a preferential switch towards the off-position of the invertible DNA element located upstream of the fim operon. This was also correlated with a decrease in the flagellar regulator flhDC mRNA levels, suggesting that the transcriptional regulator FlhD(2)C(2) could control type 1 pili expression directly or indirectly. Transformation with a cloned fim operon allowed bypass of the type 1 pili downexpression in the LF82-DeltafliC mutant. Thus, we showed that flagella play a direct role in the adhesion process via active motility. In addition to downregulating type 1 pili expression, flagella also play an undefined role in strain LF82 invasion, which is not restricted to motility or flagellar structure, but could be related to co-ordinate expression of invasive determinants.

AN 2003:342360 SCISEARCH
GA The Genuine Article (R) Number: 666TC
TI Regulatory and functional co-operation of flagella and type 1 pili in adhesive and invasive abilities of AIEC strain LF82 isolated from a patient with Crohn's disease
AU Barnich N; Boudeau J; Claret L; Darfeuille-Michaud A (Reprint)
CS Univ Auvergne, Bacteriol Lab, 28 Pl Henri Dunant, F-63001 Clermont Ferrand, France (Reprint); Univ Auvergne, Bacteriol Lab, F-63001 Clermont Ferrand, France
CYA France
SO MOLECULAR MICROBIOLOGY, (MAY 2003) Vol. 48, No. 3, pp. 781-794.
Publisher: BLACKWELL PUBLISHING LTD, 9600 GARSINGTON RD, OXFORD OX4 2DG, OXON, ENGLAND.
ISSN: 0950-382X.
DT Article; Journal
LA English
REC Reference Count: 48
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 23 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 2

AB The disulfide oxidoreductase, DsbA, mediates disulfide bond formation in proteins as they enter or pass through the periplasm of gram-negative bacteria. Although DsbA function has been well characterized, less is known about the factors that control its expression. Previous studies with Escherichia coli demonstrated that dsbA is part of a two-gene operon that includes an uncharacterized, upstream gene, yihE, that is positively regulated via the Cpx stress response pathway. To clarify the role of the yihE homologue on dsbA expression in **Salmonella** enterica serovar Typhimurium, the effect of this gene (termed rdoA) on the regulation of dsbA expression was investigated. Transcriptional assays assessing rdoA promoter activity showed growth phase-dependent expression with maximal activity in stationary phase. Significant quantities of rdoA and dsbA transcripts exist in serovar Typhimurium, but only extremely low levels of rdoA-dsbA cotranscript were detected. Activation of the Cpx system in serovar Typhimurium increased synthesis of both rdoA- and dsbA-specific transcripts but did not significantly alter the levels of detectable cotranscript. These results indicate that Cpx-mediated induction of dsbA transcription in serovar Typhimurium does not occur through an rdoA-dsbA cotranscript. A **deletion** of the rdoA coding region was constructed to definitively test the relevance of the rdoA-dsbA cotranscript to dsbA expression. The absence of RdoA affects DsbA expression levels when the Cpx system is activated, and providing rdoA in trans complements this phenotype, supporting the hypothesis that a bicistronic mechanism is not involved in serovar Typhimurium dsbA regulation. The rdoA null strain was also shown to be altered in flagellar phase variation. First it was found that induction of the Cpx stress response pathway switched flagellar synthesis to primarily phase 2

flagellin, and this effect was then found to be abrogated in the rdoA null strain, suggesting the involvement of RdoA in mediating Cpx-related signaling.
AN 2003:64566 BIOSIS
DN PREV200300064566
TI **Salmonella** enterica serovar Typhimurium rdoA is growth phase regulated and involved in relaying Cpx-induced signals.
AU Suntharalingam, P.; Spencer, H.; Gallant, C. V.; Martin, N. L. (1)
CS (1) Department of Microbiology and Immunology, Queen's University, Kingston, ON, K7L 3N6, Canada: nlm@post.queensu.ca Canada
SO Journal of Bacteriology, (January 2003, 2003) Vol. 185, No. 2, pp. 432-443. print.
ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 24 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 3
AB Erwinia carotovora subsp. carotovora is a causal agent of soft-rot diseases in a wide variety of plants. Here, we have isolated a new regulatory factor involved in the virulence of E. carotovora subsp. carotovora by in vivo insertional mutagenesis using a transposon Tn5. The gene was homologous to cytR encoding a transcriptional repressor of nucleoside uptake and catabolism genes in Escherichia coli, **Salmonella** typhimurium, and Vibrio cholerae. Phenotypic characterization of a nonpolar **deletion** mutant of the cytR homologue (DELTAcytR) revealed that the DELTAcytR mutant produced a reduced level of polygalacturonase (Peh) and lost its motility compared to that in the parental strain. With electron microscopy, the DELTAcytR mutant was shown to be aflagellate. Furthermore, the expression of fliA and fliC (encoding sigma28 and **flagellin**, respectively) was also reduced in DELTAcytR mutant. The virulence of DELTAcytR mutant was reduced in Chinese cabbage and potato compared to that of the parental strain. These results suggest that the CytR homologue of E. carotovora subsp. carotovora positively controls Peh production and flagellum synthesis and plays an important role in its pathogenicity.
AN 2003:275770 BIOSIS
DN PREV200300275770
TI Peh production, flagellum synthesis, and virulence reduced in Erwinia carotovora subsp. carotovora by mutation in a homologue of cytR.
AU Matsumoto, Hiroyuki; Muroi, Hironobu; Umehara, Masahiro; Yoshitake, Yoshimasa; Tsuyumu, Shinji (1)
CS (1) Faculty of Agriculture, Shizuoka University, 836 Ohya, Shizuoka, 422-8529, Japan: tsuyumu@agr.shizuoka.ac.jp Japan
SO Molecular Plant-Microbe Interactions, (May 2003, 2003) Vol. 16, No. 5, pp. 389-397. print.
ISSN: 0894-0282.
DT Article
LA English

L4 ANSWER 25 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 4
AB The roles of flagella and five fimbriae (SEF14, SEF17, SEF21, pef, lpf) in the early stages (up to 3 days) of **Salmonella** enterica serovar Enteritidis (S. Enteritidis) infection have been investigated in the rat. Wild-type strains LA5 and S1400 (fim+/fla+) and insertionally inactivated mutants unable to express the five fimbriae (fim-/fla+), flagella (fim+/fla-) or fimbriae and flagella (fim-/fla-) were used. All wild-type and mutant strains were able to colonize the gut and spread to the mesenteric lymph nodes, liver and spleen. There appeared to be little or no difference between the fim-/fla+ and wild-type (fim+/fla+) strains. In contrast, the numbers of aflagellate (fim+/fla- or fim-/fla-) **salmonella** in the liver and spleen were transiently reduced. In addition, fim+/fla- or fim-/fla-strains were less able to persist in the

upper gastrointestinal tract and the inflammatory responses they elicited in the gut were less severe. Thus, expression of SEF14, SEF17, SEF21, pef and lpf did not appear to be a prerequisite for induction of S. Enteritidis infection in the rat. **Deletion** of flagella did, however, disadvantage the bacterium. This may be due to the inability to produce or release the potent immunomodulating protein **flagellin**

AN 2003:115205 BIOSIS
DN PREV200300115205
TI Lack of flagella disadvantages **Salmonella** enterica serovar Enteritidis during the early stages of infection in the rat.
AU Robertson, Jeanette M. C.; McKenzie, Norma H.; Duncan, Michelle; Allen-Vercoe, Emma; Woodward, Martin J.; Flint, Harry J.; Grant, George (1)
CS (1) Gut Microbiology and Immunology Division, Rowett Research Institute, Greenburn Road, Bucksburn, Aberdeen, AB21 9SB, UK: G.Grant@rowett.ac.uk UK
SO Journal of Medical Microbiology, (January 2003, 2003) Vol. 52, No. 1, pp. 91-99. print.
ISSN: 0022-2615.
DT Article
LA English

L4 ANSWER 26 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB To investigate the role of flagella and monomer **flagellin** in the interaction between Pseudomonas syringae pv. tabaci and plants, non-polar fliC and fliD mutants were produced. The ORFs for fliC and fliD are **deleted** in the DeltafliC and DeltafliD mutants, respectively. Both mutants lost all flagella and were non-motile. The DeltafliC mutant did not produce **flagellin**, whereas the DeltafliD mutant, which lacks the HAP2 protein, secreted large amounts of monomer **flagellin** into the culture medium. Inoculation of non-host tomato leaves with wild-type P. syringae pv. tabaci or the DeltafliD mutant induced a hypersensitive reaction (HR), whereas the Deltaflid mutant propagated and caused characteristic symptom-like changes. In tomato cells in suspension culture, wild-type P. syringae pv. tabaci induced slight, visible HR-like changes. The DeltafliC mutant did not induce HR, but the DeltafliD mutant induced a remarkably strong HR. Expression of the hsr203J gene was rapidly and strongly induced by inoculation with the DeltafliD mutant, compared to inoculation with wild-type P. syringae pv. tabaci. Furthermore, introduction of the fliC gene into the DeltafliC mutant restored motility and HR-inducing ability in tomato. These results, together with our previous study, suggest that the **flagellin** monomer of pv. tabaci acts as a strong elicitor to induce HR-associated cell death in non-host tomato cells.
AN 2003:462973 SCISEARCH
GA The Genuine Article (R) Number: 681JE
TI The Delta fliD mutant of Pseudomonas syringae pv. tabaci, which secretes **flagellin** monomers, induces a strong hypersensitive reaction (HR) in non-host tomato cells
AU Shimizu R; Taguchi F; Marutani M; Mukaihara T; Inagaki Y; Toyoda K; Shiraishi T; Ichinose Y (Reprint)
CS Okayama Univ, Fac Agr, Lab Plant Pathol & Genet Engn, 1-1-1 Tsushima Naka, Okayama 7008530, Japan (Reprint); Okayama Univ, Fac Agr, Lab Plant Pathol & Genet Engn, Okayama 7008530, Japan; RIBS Okayama, Kayo, Okayama 7161241, Japan
CYA Japan
SO MOLECULAR GENETICS AND GENOMICS, (APR 2003) Vol. 269, No. 1, pp. 21-30. Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.
ISSN: 1617-4615.
DT Article; Journal
LA English
REC Reference Count: 38
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 27 OF 177 USPATFULL
AB Disclosed are polypeptides named HP1122, Cj1464 and PA3351 which are the anti-.sigma..sup.28 factor of Helicobacter pylori, Campylobacter jejuni and Pseudomonas aeruginosa, respectively and fragments and variants thereof. Also disclosed is a polypeptide named SID1122 which is the domain of Helicobacter pylori's HP1122 polypeptide involved in a specific interaction with Helicobacter pylori .sigma..sup.28 (HP1032) and which has an anti-.sigma..sup.28 factor activity. Further disclosed are a SID1122 polypeptide that interacts with HP1032, identification of the HP1032 interacting domain (SID1032) that is specifically involved in the interaction with HP1122, complexes of two polypeptides such as HP1122-HP1032, or SID1122-SID1032, fragments and variants of the SID1122 and SID1032 polypeptides, antibodies to the SID1122 and SID1032 polypeptides, methods for screening drugs or agents which modulate the interaction of Helicobacter pylori's polypeptides encoded by HP1122 and HP1032, and pharmaceutical compositions for treating or preventing Gram negative flagellated bacteria infection in a human or mammal, more specifically Helicobacter sp. or Campylobacter jejuni or Pseudomonas aeruginosa infection, in particular Helicobacter pylori infection in a human or a mammal.
AN 2002:337436 USPATFULL
TI Anti-sigma28 factors in Helicobacter pylori, Campylobacter jejuni and Pseudomonas aeruginosa and applications thereof
IN Legrain, Pierre, Paris, FRANCE
Colland, Frederic, Fosses, FRANCE
Rain, Jean-Christophe, Puteaux, FRANCE
Labigne, Agnes, Bures-sur-yvette, FRANCE
De Reuse, Hilde, Paris, FRANCE
PI US 2002192796 A1 20021219
AI US 2002-66127 A1 20020131 (10)
PRAI US 2001-265465P 20010131 (60)
DT Utility
FS APPLICATION
LREP LERNER, DAVID, LITTENBERG,, KRUMHOLZ & MENTLIK, 600 SOUTH AVENUE WEST, WESTFIELD, NJ, 07090
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1686
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 28 OF 177 USPATFULL
AB Conjugate molecules which include photosensitizer compositions conjugated to non-antibody non-affinity pair targeting moieties and methods of making and using such conjugates are described.
AN 2002:323079 USPATFULL
TI Photosensitizer conjugates for pathogen targeting
IN Hasan, Tayyaba, Arlington, MA, UNITED STATES
Hamblin, Michael R., Revere, MA, UNITED STATES
Soukos, Nikos, Revere, MA, UNITED STATES
PI US 2002183245 A1 20021205
AI US 2002-143593 A1 20020509 (10)
RLI Division of Ser. No. US 1997-812606, filed on 6 Mar 1997, PENDING
DT Utility
FS APPLICATION
LREP FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY, 10151
CLMN Number of Claims: 56
ECL Exemplary Claim: 1
DRWN 11 Drawing Page(s)
LN.CNT 2695
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 29 OF 177 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method

that combines variegated peptide display libraries, e.g., in a "display mode", with soluble secreted peptide libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of peptides having a desired biological activity.

AN 2002:307817 USPATFULL
TI Methods and reagents for isolating biologically active peptides
IN Gyuris, Jeno, Winchester, MA, UNITED STATES
Morris, Aaron J., Boston, MA, UNITED STATES
PI US 2002172940 A1 20021121
AI US 2002-80854 A1 20020222 (10)
RLI Continuation of Ser. No. US 1998-174943, filed on 19 Oct 1998, GRANTED, Pat. No. US 6420110
DT Utility
FS APPLICATION
LREP ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
CLMN Number of Claims: 79
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 3210
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 30 OF 177 USPATFULL
AB A method of producing pili and vaccines containing pili are described using bacteria that express at least one immunogenic peptide in a PapA region that does not normally contain such a peptide.

AN 2002:258441 USPATFULL
TI Immunogenic pili presenting foreign peptides, their production and use
IN O'Hanley, Peter, Washington, DC, UNITED STATES
Denich, Kenneth, Edmonton, CANADA
Schmidt, M. Alexander, Muenster, GERMANY, FEDERAL REPUBLIC OF
PI US 2002142008 A1 20021003
AI US 2001-833079 A1 20010412 (9)
PRAI US 2000-196491P 20000412 (60)
DT Utility
FS APPLICATION
LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 967
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 31 OF 177 USPATFULL
AB Disclosed are bacteria having virulence attenuated by a mutation to the regulatory gene poxR. Also disclosed is a method of producing bacteria having virulence attenuated by mutating to the regulatory gene poxR. Such bacteria are useful for inducing an immune response in an animal or human against virulent forms of the bacteria with reduced risk of a virulent infection. Such bacteria are also useful to allow use of normally virulent bacteria as research tools with reduced risk of virulent infection. In a preferred embodiment, poxR attenuated bacteria can be used as a vaccine to induce immunoprotection in an animal against virulent forms of the bacteria. The disclosed bacteria can also be used as hosts for the expression of heterologous genes and proteins or to deliver DNA for genetic immunization. Attenuated bacteria with such expression can be used, for example, to deliver and present heterologous antigens to the immune system of an animal. Such presentation on live bacteria can lead to improved stimulation of an immune response by the animal to the antigens. It has been discovered that bacteria harboring a poxR mutation has significantly reduced virulence. Also disclosed is the nucleotide sequence of the poxR gene from **Salmonella** typhimurium, and the amino acid sequence of the encoded protein. The encoded protein has 325 amino acids and has significant sequence similarity to previously uncharacterized open reading frames in E. coli

and Haemophilus influenzae.
AN 2002:171629 USPATFULL
TI METHODS OF PRODUCING AND USING VIRULENCE ATTENUATED POXR MUTANT BACTERIA
IN KANIGA, KONE, ST. LOUIS, MO, UNITED STATES
SUNDARAM, PREETI, CHESTERFIELD, MO, UNITED STATES
PI US 2002090376 A1 20020711
US 6537558 B2 20030325
AI US 1997-829402 A1 19970331 (8)
DT Utility
FS APPLICATION
LREP THOMPSON COBURN, LLP, ONE FIRSTAR PLAZA, SUITE 3500, ST LOUIS, MO, 63101
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1661
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 32 OF 177 USPATFULL
AB Provided are streptolysin S (SLS) polypeptides, peptides, and variants thereof, antibodies directed thereto, and isolated nucleic acids encoding such proteins. In one embodiment, a method is provided wherein a synthetic peptide of SLS is used to elicit an immune response specific for SLS in a subject to treat or prevent a streptococcal infection. In other embodiments, antibodies that neutralize the hemolytic activity of the SLS toxin may be used as a vaccinating agent.
AN 2002:164409 USPATFULL
TI Streptococcal streptolysin S vaccines
IN Dale, James B., Memphis, TN, UNITED STATES
PA University of Tennessee Research Corporation, Knoxville, TN, 37996-1527 (U.S. corporation)
PI US 2002086023 A1 20020704
AI US 2001-975455 A1 20011010 (9)
PRAI US 2000-239432P 20001010 (60)
DT Utility
FS APPLICATION
LREP SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092
CLMN Number of Claims: 53
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 33 OF 177 USPATFULL
AB The present invention provides methods for the modulation of vascular tone in a patient having compromised vascular tissue, which methods comprise the administration of a chloride channel blocking agent or a pharmaceutically acceptable salt thereof.
AN 2002:126808 USPATFULL
TI Use of CLC3 chloride channel blockers to modulate vascular tone
IN Lamb, Fred S., Solon, IA, UNITED STATES
Schutte, Brian C., Iowa City, IA, UNITED STATES
Yang, Baoli, Cedar Rapids, IA, UNITED STATES
PI US 2002065325 A1 20020530
AI US 2001-930105 A1 20010815 (9)
RLI Continuation-in-part of Ser. No. US 2000-512926, filed on 25 Feb 2000, PENDING
PRAI US 1999-121727P 19990226 (60)
DT Utility
FS APPLICATION
LREP SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A., P.O. BOX 2938, MINNEAPOLIS, MN, 55402
CLMN Number of Claims: 43
ECL Exemplary Claim: 1

DRWN 18 Drawing Page(s)
LN.CNT 2662
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 34 OF 177 USPATFULL
AB A method of immunizing against plaque forming diseases using display technology is provided. The method utilize novel agents, or pharmaceutical compositions for vaccination against plaque forming diseases which rely upon presentation of an antigen or epitope on a display vehicle. The method further includes agents, or pharmaceutical compositions for vaccination against plaque forming diseases, which rely upon presentation of an antibody, or an active portion thereof, on a display vehicle. Whether antigens or antibodies are employed, disaggregation of plaques results from the immunization. The methods of the present invention also generally relates to treating and/or diagnosing neurological diseases and disorders of the central nervous, regardless of whether the disease or disorder is plaque-forming or non-plaque forming.
AN 2002:99410 USPATFULL
TI Methods and compostions for the treatment and/or diagnosis of neurological diseases and disorders
IN Solomon, Beka, Herzlia Pituach, ISRAEL
Frenkel, Dan, Rehovot, ISRAEL
PI US 2002052311 A1 20020502
AI US 2001-808037 A1 20010315 (9)
RLI Continuation-in-part of Ser. No. US 2000-629971, filed on 31 Jul 2000, PENDING Continuation-in-part of Ser. No. US 1999-473653, filed on 29 Dec 1999, PENDING
PRAI US 1999-152417P 19990903 (60)
DT Utility
FS APPLICATION
LREP BROWDY AND NEIMARK, P.L.L.C., 624 NINTH STREET, NW, SUITE 300, WASHINGTON, DC, 20001-5303
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 30 Drawing Page(s)
LN.CNT 4074
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 35 OF 177 USPATFULL
AB The invention provides methods and compositions for inducing and maintaining tolerance to epitopes or antigens containing the epitopes. The compositions include expression cassettes and vectors including DNA sequences coding for a fusion immunoglobulin operably linked to transcriptional and translational control regions functional in a hemopoietic or lymphoid cell. The fusion immunoglobulin includes at least one heterologous tolerogenic epitope at the N-terminus variable region of the immunoglobulin. Cells stably transformed with the expression vector are formed and used to produce fusion immunoglobulin. The invention also provides methods for screening for novel tolerogenic epitopes and for inducing and maintaining tolerance. The methods of the invention are useful in the diagnosis and treatment of autoimmune or allergic immune responses.
AN 2002:92045 USPATFULL
TI TOLEROGENIC FUSION PROTEINS OF IMMUNOGLOBULINS AND METHODS FOR INDUCING AND MAINTAINING TOLERANCE
IN SCOTT, DAVID W., PITTSFORD, NY, UNITED STATES
ZAMBIDIS, ELIAS T., ROCHESTER, NY, UNITED STATES
PI US 2002048562 A1 20020425
AI US 1998-160076 A1 19980924 (9)
RLI Division of Ser. No. US 1994-195874, filed on 11 Feb 1994, GRANTED, Pat. No. US 5817308
DT Utility
FS APPLICATION

LREP SHMUEL LIVNAT, MORRISON & FOERSTER, 2000 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 200061888
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1406
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 36 OF 177 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method that combines variegated antibody display libraries, e.g., in a "display mode", with soluble secreted antibody libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of antibodies having a desired biological activity.
AN 2002:43170 USPATFULL
TI Methods and reagents for isolating biologically active antibodies
IN Gyuris, Jeno, Winchester, MA, UNITED STATES
Ewert, Sebastian-Meier, Wolfratshausen, GERMANY, FEDERAL REPUBLIC OF
Nagy, Zolton, Wolfratshausen, GERMANY, FEDERAL REPUBLIC OF
Morris, Aaron, Brighton, MA, UNITED STATES
PI US 2002025536 A1 20020228
AI US 2001-891557 A1 20010626 (9)
PRAI US 2000-214200P 20000626 (60)
DT Utility
FS APPLICATION
LREP ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
CLMN Number of Claims: 83
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 3051
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 37 OF 177 USPATFULL
AB Novel hemolysin fusion proteins can be produced by inserting a foreign nucleotide sequence encoding an immunogenic peptide in a region of HlyA corresponding to the CnBr II through CnBr V region of HlyA.
AN 2002:3620 USPATFULL
TI Hemolysin fusion proteins, their production and use
IN O'Hanley, Peter, Washington, DC, UNITED STATES
LaLonde, Guy, Woodside, CA, UNITED STATES
PI US 2002001593 A1 20020103
AI US 2001-833063 A1 20010412 (9)
PRAI US 2000-196492P 20000412 (60)
DT Utility
FS APPLICATION
LREP Stephen B. Maebius, FOLEY & LARDNER, Suite 500, 3000 K Street, N.W., Washington, DC, 20007-5109
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 194
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 38 OF 177 USPATFULL
AB The present invention relates to peptides which exhibit potent anti-viral activity. In particular, the invention relates to methods of using such peptides as inhibitory of respiratory syncytial virus ("RSV") transmission to uninfected cells. The peptides used in the methods of the invention are homologs of the DP-178 and DP-107 peptides, peptides corresponding to amino acid residues 638 to 673, and to amino acid residues 558 to 595, respectively, of the HIV-1.sub.LAI transmembrane protein (TM) gp41.
AN 2002:297296 USPATFULL
TI Methods for inhibition of membrane fusion-associated events, including

respiratory syncytial virus transmission
IN Bolognesi, Dani Paul, Durham, NC, United States
Matthews, Thomas James, Durham, NC, United States
Wild, Carl T., Durham, NC, United States
Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
Langlois, Alphonse J., Durham, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6479055 B1 20021112
AI US 1995-470896 19950606 (8)
RLI Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS GRANTED
EXNAM Primary Examiner: Stucker, Jeffrey
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 44
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 26553
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 39 OF 177 USPATFULL
AB The present application relates to nucleotide sequences which regulate the biosynthesis of the flagella proteins Helicobacter pylori, to the proteins encoded by these sequences and to aflagellate bacterial strains. The invention also relates to the use of these means for detecting an infection due to H . pylori or for protecting against such an infection.
AN 2002:291079 USPATFULL
TI Cloning and characterization of FLBA gene of H. pylori production of aflagellate
IN Suerbaum, Sebastian, Bochum, GERMANY, FEDERAL REPUBLIC OF
Labigne, Agnes, Bures sur Yvette, FRANCE
PA Institut Pasteur, Paris, FRANCE (non-U.S. corporation)
Institut National de la Sante et de la Recherche Medicale, Paris, FRANCE (non-U.S. corporation)
PI US 6476213 B1 20021105
AI US 1996-671757 19960628 (8)
PRAI FR 1995-8508068 19950704
DT Utility
FS GRANTED
EXNAM Primary Examiner: Kunz, Gary L.; Assistant Examiner: Gucker, Stephen
LREP Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 22 Drawing Figure(s); 22 Drawing Page(s)
LN.CNT 2013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 40 OF 177 USPATFULL
AB Conjugate molecules which include photosensitizer compositions conjugated to non-antibody non-affinity pair targeting moieties and methods of making and using such conjugates are described.
AN 2002:262378 USPATFULL
TI Photosensitizer conjugates for pathogen targeting
IN Hasan, Tayyaba, Arlington, MA, United States
Hamblin, Michael R., Revere, MA, United States
Soukos, Nikos, Revere, MA, United States
PA The General Hospital Corporation, Boston, MA, United States (U.S. corporation)

PI US 6462070 B1 20021008
AI US 1997-812606 19970306 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Travers, Russell
LREP Frommer Lawrence & Haug LLP, Kowalski, Thomas J., Leahy, Amy
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 2666
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 41 OF 177 USPATFULL
AB The present invention relates to DNA sequences encoding Vmp-like polypeptides of pathogenic Borrelia, the use of the DNA sequences in recombinant vectors to express polypeptides, the encoded amino acid sequences, application of the DNA and amino acid sequences to the production of polypeptides as antigens for immunoprophylaxis, immunotherapy, and immunodiagnosis. Also disclosed are the use of the nucleic acid sequences as probes or primers for the **deletion** of organisms causing Lyme disease, relapsing fever, or related disorders, and kits designed to facilitate methods of using the described polypeptides, DNA segments and antibodies.
AN 2002:209671 USPATFULL
TI VMP-like sequences of pathogenic borrelia
IN Norris, Steven J., Houston, TX, United States
Zhang, Jing-Ren, Houston, TX, United States
Hardham, John M., Houston, TX, United States
Howell, Jerrilyn K., Houston, TX, United States
Barbour, Alan G., Irvin, CA, United States
Weinstock, George M., Houston, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6437116 B1 20020820
WO 9731123 19970828
AI US 1999-125619 19990127 (9)
WO 1997-US2952 19970220
19990127 PCT 371 date
PRAI US 1996-12028P 19960221 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swartz, Rodney P
LREP Fulbright & Jaworski LLP
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 19 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 5173
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 42 OF 177 USPATFULL
AB Compositions and methods for detecting the conversion to mucoidy in Pseudomonas aeruginosa are disclosed. Chronic respiratory infections with mucoid Pseudomonas aeruginosa are the leading cause of high mortality and morbidity in cystic fibrosis. The initially colonizing strains are nonmucoid but in the cystic fibrosis lung they invariably convert into the mucoid form causing further disease deterioration and poor prognosis. Mucoidy is a critical P. aeruginosa virulence factor in cystic fibrosis that has been associated with biofilm develoment and resistance to phagocytosis. The molecular basis of this conversion to mucoidy is also disclosed. The present invention provides for detecting the switch from nonmucoid to mucoid state as caused by either frameshift **deletions** and duplications or nonsense changes in the second gene of the cluster, mucA. Inactivation of mucA results in constitutive expression of genes, such as algD, dependent on algU for transcription.

Also disclosed is a novel alginate biosynthesis heterologous expression system for use in screening candidate substances that inhibit conversion to mucoidy.

AN 2002:188220 USPATFULL
TI Detection of conversion to mucoidy in Pseudomonas aeruginosa infecting cystic fibrosis patients
IN Deretic, Vojo, San Antonio, TX, United States
Martin, Daniel W., Palo Alto, CA, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6426187 B1 20020730
AI US 2000-609151 20000630 (9)
RLI Continuation of Ser. No. US 1995-505307, filed on 24 Nov 1995, now patented, Pat. No. US 6083691, issued on 4 Jul 2000 Continuation-in-part of Ser. No. US 1994-260202, filed on 15 Jun 1994, now patented, Pat. No. US 5573910 Continuation-in-part of Ser. No. US 1993-17114, filed on 12 Feb 1993, now patented, Pat. No. US 5591838
PRAI WO 1994-US2034 19940214
DT Utility
FS GRANTED
EXNAM Primary Examiner: Myers, Carla J.; Assistant Examiner: Johannsen, Diana
LREP Fulbright & Jaworski L.L.P.
CLMN Number of Claims: 33
ECL Exemplary Claim: 28
DRWN 22 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 3294
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 43 OF 177 USPATFULL
AB One aspect of the present invention is the synthesis of a binary method that combines variegated peptide display libraries, e.g., in a "display mode", with soluble secreted peptide libraries, e.g., in a "secretion mode", to yield a method for the efficient isolation of peptides having a desired biological activity.
AN 2002:174944 USPATFULL
TI Methods and reagents for isolating biologically active peptides
IN Gyuris, Jeno, Winchester, MA, United States
Morris, Aaron J., Boston, MA, United States
PA GPC Biotech, Inc., Waltham, MA, United States (U.S. corporation)
PI US 6420110 B1 20020716
AI US 1998-174943 19981019 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Ponnaluri, Padmashri
LREP Ropes & Gray, Vincent, Matthew P., Halstead, David P.
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 3145
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 44 OF 177 USPATFULL
AB The entire genome of pathogenic E. coli strain O157:H7 has been sequenced. All of the genomic DNA sequences present in O157 and absent in the previously sequenced laboratory strain K12 are presented here.
AN 2002:70106 USPATFULL
TI Sequences of E. coli O157
IN Blattner, Frederick R., Madison, WI, United States
Burland, Valerie, Cross Plains, WI, United States
Perna, Nicole T., Madison, WI, United States
Plunkett, Guy, Madison, WI, United States
Welch, Rod, Madison, WI, United States
PA Wisconsin Alumni Research Foundation, Madison, WI, United States (U.S. corporation)

PI US 6365723 B1 20020402
AI US 1999-453702 19991203 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fredman, Jeffrey
LREP Quarles & Brady LLP
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1583
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 45 OF 177 USPATFULL
AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by infection with Borrelia burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyme disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.
AN 2002:24372 USPATFULL
TI Compositions and methods comprising DNA sequences encoding B. burgdorferi polypeptides
IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 6344552 B1 20020205
AI US 1995-455973 19950531 (8)
RLI Division of Ser. No. US 1994-320161, filed on 7 Oct 1994, now patented, Pat. No. US 5747294 Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned Continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned Continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Bui, Phuong T
LREP Fish & Neave, Haley, Jr., Esq, James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2577
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 46 OF 177 MEDLINE
AB A multidrug-resistant fljB-lacking **Salmonella** enterica serovar [4,5,12:i:-] emerged in Spain in 1997. We analyzed the genome from four strains of this serovar using a microarray containing almost all the predicted protein coding regions of serovar Typhimurium strain LT2, including the pSLT plasmid. Only a few differences from serovar Typhimurium LT2 were observed, suggesting the serovar to be Typhimurium as well. Six regions of interest were identified from the microarray data. Cluster I was a **deletion** of 13 genes, corresponding to part of the regulon responsible for the anaerobic assimilation of allantoin. Clusters II and IV were associated with the absence of the Fels-1 and Fels-2 prophage. Cluster III was a small group of Gifsy-1 prophage-related genes that appeared to be **deleted** or replaced. Cluster V was a **deletion** of 16 genes, including iroB and the operon fljAB, which is reflected in the serovar designation. Region VI

was the gene STM2240, which appears to have an additional homologue in these strains. The regions spanning the **deletions** involving the allantoin operon and the fljAB operon were PCR amplified and sequenced. PCR across these regions may be an effective marker for this particular emergent serovar. While the microarray data for all isolates of the new serovar were essentially identical for all LT2 chromosomal genes, the isolates differed in their similarity to pSLT, consistent with the heterogeneity in plasmid content among isolates of the new serovar. Recent isolates have acquired a more-complete subset of homologues to this virulence plasmid. In general, microarrays can provide useful complementary data to other typing methods.

AN 2002323830 MEDLINE
DN 22033298 PubMed ID: 12037067
TI DNA microarray-based typing of an atypical monophasic **Salmonella** enterica serovar.
AU Garaizar Javier; Porwollik Steffen; Echeita Aurora; Rementeria Aitor; Herrera Silvia; Wong Rita Mei-Yi; Frye Jonathan; Usera Miguel A; McClelland Michael
CS Sidney Kimmel Cancer Center, San Diego, California 92121, USA.
NC AI34829 (NIAID)
AI43283 (NIAID)
SO JOURNAL OF CLINICAL MICROBIOLOGY, (2002 Jun) 40 (6) 2074-8.
Journal code: 7505564. ISSN: 0095-1137.
CY United States
DT (EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020618
Last Updated on STN: 20020814
Entered Medline: 20020813

L4 ANSWER 47 OF 177 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
AB The ClpXP protease is a member of the ATP-dependent protease family and plays a dynamic role in the control of availability of regulatory proteins and the breakdown of abnormal and misfolded proteins. The proteolytic activity is rendered by the ClpP component, while the substrate specificity is detd. by the ClpX component that has ATPase activity. We describe here a new role of the ClpXP protease in **Salmonella** enterica serovar Typhimurium in which ClpXP is involved in the regulation of flagellum synthesis. Cells **deleted** for ClpXP show hyperflagellate phenotype, exhibit overprodn. of the flagellar protein, and show a four-fold increase in the rate of transcription of the fliC encoding flagellar filament. The assay for promoter activity of the genes responsible for expression of the fliC showed that the depletion of ClpXP results in dramatic enhancement of the expression of the fliA encoding sigma factor .sigma.28, leaving the expression level of the flhD master operon lying at the top of the transcription hierarchy of flagellar regulon almost normal. These results suggest that the ClpXP may be responsible for repressing the expression of flagellar regulon through the control of the FlhD/FlhC master regulators at the posttranscriptional and/or posttranslational levels. Proteome anal. of proteins secreted from the mutant cells deficient for flhDC and clpXP genes demonstrated that the .DELTA.flhD mutation abolished the enhanced effect by .DELTA.clpXP mutation on the prodn. of flagellar proteins, suggesting that the ClpXP possibly defines a regulatory pathway affecting the expression of flagellar regulon that is dependent on FlhD/FlhC master regulators.
AN 2002:70521 CAPLUS
DN 136:258222
TI The ClpXP ATP-dependent protease regulates flagellum synthesis in **Salmonella** enterica serovar typhimurium
AU Tomoyasu, Toshifumi; Ohkishi, Tomiko; Ukyo, Yoshifumi; Tokumitsu, Akane; Takaya, Akiko; Suzuki, Masato; Sekiya, Kachiko; Matsui, Hidenori;

Kutsukake, Kazuhiro; Yamamoto, Tomoko
CS Department of Microbiology and Molecular Genetics, Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, 263-8522, Japan
SO Journal of Bacteriology (2002), 184(3), 645-653
CODEN: JOBAAY; ISSN: 0021-9193
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 48 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 6
AB Helicobacter pylori is thought to regulate gene expression with a very small set of regulatory genes. We identified a previously unannotated open reading frame (ORF) in the H. pylori 26695 genome (HP1122) as a putative H. pylori flgM gene (sigma28 factor antagonist) by a motif-based bioinformatic approach. **Deletion** of HP1122 resulted in a fourfold increase in transcription of the sigma28-dependent major **flagellin** gene flaA, supporting the function of HP1122 as H. pylori FlgM. Helicobacter pylori FlgM lacks a conserved 20-amino-acid N-terminal domain of enterobacterial FlgM proteins, but was able to interact with the **Salmonella** typhimurium sigma28 (FliA) and inhibit the expression of FliA-dependent genes in **Salmonella**. Helicobacter pylori FlgM inhibited FliA to the same extent in a **Salmonella** strain with an intact flagellar export system and in an export-deficient strain. Helicobacter pylori FliA was able to drive transcription of FliA-dependent genes in **Salmonella**. The effects of mutations in the H. pylori flgM and fliA genes on the H. pylori transcriptome were analysed using whole genome DNA microarrays. The antagonistic roles of FlgM and FliA in controlling the transcription of the major **flagellin** gene flaA were confirmed, and two additional FliA/FlgM dependent operons (HP472 and HP1051/HP1052) were identified. None of the three genes contained in these operons has a known function in flagellar biogenesis in other bacteria. Like other motile bacteria, H. pylori has a FliA/FlgM pair of sigma and anti-sigma factors, but the genes controlled by these differ markedly from the **Salmonella** /Escherichia coli paradigm.
AN 2002:174912 BIOSIS
DN PREV200200174912
TI Functional characterization of the antagonistic flagellar late regulators FliA and FlgM of Helicobacter pylori and their effects on the H. pylori transcriptome.
AU Josenhans, Christine (1); Niehus, Eike; Amersbach, Stefanie; Hoerster, Andrea; Betz, Christian; Drescher, Bernd; Hughes, Kelly T.; Suerbaum, Sebastian
CS (1) Institute for Hygiene and Microbiology, University of Wuerzburg, D-97080, Wuerzburg: cjosenhans@hygiene.uni-wuerzburg.de Germany
SO Molecular Microbiology, (January, 2002) Vol. 43, No. 2, pp. 307-322. http://www.blackwell-synergy.com/Journals/issuelist.asp?journal=mmi. print.
ISSN: 0950-382X.
DT Article
LA English

L4 ANSWER 49 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Attenuated **Salmonella** typhimurium expressing foreign antigens elicit immune responses to both foreign and **Salmonella** antigens. To investigate the possibility of the modulation of immune responses to the Streptococcus pneumoniae PspA antigen by the antigen carrier **Salmonella** vaccines, we constructed various S. typhimurium vaccines with two questions in mind. First, how do different **Salmonella** attenuation types influence the immune response for the delivered foreign antigen? Two recombinant S. typhimurium vaccines,

DELTAcrp-28 and DELTAphoP24, were constructed by the introduction of defined **deletion** mutations in the genes for cyclic AMP receptor protein (crp) and responder gene phoP of the PhoP/Q two-component-regulatory system. Second, how does surface adhesions on **Salmonella** vaccines affect immune responses to the delivered foreign antigen? Three S. typhimurium adhesin variants were constructed; a strain with **deletions** of both **flagellin** genes (DELTAfliC DELTAfljB), a type 1 fimbriae overproducing strain with DELTAfimW and a type 1 fimbriae defective strain (DELTAfimA DELTAfimH). These adhesin variants were attenuated by incorporation of the DELTAphoP24 mutation. After oral immunization in BALB/c mice with 109 CFU doses, the recombinant **Salmonella**-PspA vaccine strains stimulated IgG antibody responses to both the heterologous antigen PspA and its somatic antigens. The DELTAcrp vaccine induced IgG1 isotype dominant immune responses to the PspA antigen. In contrast, the DELTAphoP24 vaccine induced IgG2a isotype dominant responses. However, a booster immunization with the same vaccine stimulated the induction of significant levels of IgG1 isotype. The **flagellin** defective vaccine induced a similar IgG1/IgG2a ratio as in the flagellated vaccine. Interestingly, both DELTAfimW and DELTAfimA DELTAfimH vaccines induced IgG1 isotype dominant responses compared to the vaccine strain expressing wild-type type 1 fimbriae. The results shown in this study implicate that combination of the types of attenuation and variation of surface adhesins in **Salmonella** vaccines expressing foreign antigen can be used to modulate specific types of immune responses to a given antigen.

AN 2002:597036 BIOSIS
DN PREV200200597036
TI Variation of the PspA immune responses induced by live PspA-**Salmonella** vaccines carrying different types of attenuations and surface adhesions.
AU Kang, H. Y. (1); Lee, T. H. (1); Zhang, X. (1); Curtiss, R., III (1)
CS (1) Washington University, Saint Louis, MO USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 197. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English

L4 ANSWER 50 OF 177 USPATFULL
AB Methods and compositions for conferring tick immunity and preventing or reducing the transmission of tick-borne pathogens. Tick polypeptides, fragments and derivatives; fusion and multimeric proteins comprising the polypeptides, fragments or derivatives; nucleic acid molecules encoding them; antibodies directed against the polypeptides, fusion proteins or multimeric proteins and compositions comprising the antibodies. Vaccines comprising the polypeptides, fragments or derivatives, alone or in addition to other protective polypeptides. Methods comprising the polypeptides, antibodies and vaccines.

AN 2001:218013 USPATFULL
TI Tick antigens and compositions and methods comprising them
IN Kantor, Fred S., Orange, CT, United States
Fikrig, Erol, Guilford, CT, United States
Das, Subrata, New Haven, CT, United States
PI US 2001046499 A1 20011129
AI US 2000-728914 A1 20001201 (9)
PRAI US 1999-169048P 19991203 (60)
US 2000-240716P 20001016 (60)
DT Utility
FS APPLICATION
LREP FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY,

10020-1105
CLMN Number of Claims: 54
ECL Exemplary Claim: 1
DRWN 49 Drawing Page(s)
LN.CNT 3235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 51 OF 177 USPATFULL
AB The present invention relates to **Salmonella** bacteria for use as a vaccine. The invention also relates to vaccines based thereon that are useful for the prevention of microbial pathogenesis. Further, the invention relates to the use of such bacteria or the manufacture of such vaccines. Finally, the invention relates to methods for the preparation of such vaccines.
AN 2001:155455 USPATFULL
TI **Salmonella** vaccine
IN Nuijten, Petrus Johannes Maria, Boxmeer, Netherlands
Witvliet, Maarten Hendrik, Oostrum, Netherlands
PI US 2001021386 A1 20010913
AI US 2000-749025 A1 20001227 (9)
PRAI EP 1999-204564 19991228
DT Utility
FS APPLICATION
LREP William M. Blackstone, Akzo nobel Patent Department, Suite 206, 1300 Piccard Drive, Rockville, MD, 20850
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 745
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 52 OF 177 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:196810 USPATFULL
TI DbpA compositions and methods of use
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6312907 B1 20011106
AI US 2000-489352 20000121 (9)
RLI Division of Ser. No. US 117257, now patented, Pat. No. US 6214355 Continuation-in-part of Ser. No. US 945476 Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson

CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 31 Drawing Page(s)
LN.CNT 5376
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 53 OF 177 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:93284 USPATFULL
TI Decorin binding protein compositions and methods of use
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6248517 B1 20010619
WO 9634106 19961031
AI US 1997-945476 19971224 (8)
WO 1996-US5886 19960424
19971224 PCT 371 date
19971224 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 57
ECL Exemplary Claim: 1
DRWN 42 Drawing Figure(s); 28 Drawing Page(s)
LN.CNT 4945
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 54 OF 177 USPATFULL
AB The present invention relates to peptides which exhibit antifusogenic and antiviral activities. The peptides of the invention consist of a 16 to 39 amino acid region of a human respiratory syncytial virus protein. These regions were identified through computer algorithms capable of recognizing the ALLMOTI5, 107x178x4, or PLZIP amino acid motifs. These motifs are associated with the antifusogenic and antiviral activities of the claimed peptides.
AN 2001:67794 USPATFULL
TI Human respiratory syncytial virus peptides with antifusogenic and antiviral activities
IN Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PA Trimeris, Inc., Durham, NC, United States (U.S. corporation)
PI US 6228983 B1 20010508
AI US 1995-485264 19950607 (8)

RLI Division of Ser. No. US 1995-470896, filed on 6 Jun 1995
Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994
Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994
Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DT Utility
FS Granted
EXNAM Primary Examiner: Scheiner, Laurie; Assistant Examiner: Parkin, Jeffrey S.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 62
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 83 Drawing Page(s)
LN.CNT 32166
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 55 OF 177 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 2001:67646 USPATFULL
TI Decorin binding protein compositions
IN Guo, Betty, Houston, TX, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M Unversity System, College Station, TX, United States (U.S. corporation)
PI US 6228835 B1 20010508
AI US 1998-221938 19981228 (9)
RLI Division of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987, issued on 29 Dec 1998 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 25 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 4504
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 56 OF 177 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for

the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.

AN 2001:51579 USPATFULL
TI DbpA compositions
IN Guo, Betty P., Boston, MA, United States
Hook, Magnus, Houston, TX, United States
PA Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 6214355 B1 20010410
WO 9727301 19970731
AI US 1998-117257 19980722 (9)
WO 1996-US17081 19961022
19981029 PCT 371 date
19981029 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 945476 Continuation-in-part of Ser. No. US 1996-589711, filed on 22 Jan 1996, now patented, Pat. No. US 5853987, issued on 29 Dec 1998 Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.
LREP Williams, Morgan and Amerson
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 31 Drawing Page(s)
LN.CNT 5444
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 57 OF 177 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a FlaC **flagellin** protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the FlaC **flagellin** protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlaA or FlaB proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.

AN 2001:48033 USPATFULL
TI **Flagellin** gene, FlaC of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA University of Toronto, Toronto, Canada (non-U.S. corporation)
PI US 6211159 B1 20010403
AI US 1997-837317 19970411 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 912
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 58 OF 177 USPATFULL
AB Nucleic acid fragments are disclosed which encode a polypeptide antigen reactive with antisera from rabbits immunised with a 66 kDa protein from Borrelia garinii IP90. The presence of nucleic acid fragments encoding such a polypeptide antigen as well as the presence of the polypeptide

antigen have been demonstrated in three strains of B. burgdorferi sensu lato, but are substantialle absent from at least 95% of randomly selected B. hermsii, B. crocidurae, B. anserina, and B. hispanica. The encoded polypeptide is surface exposed on the bacterial surface, it is highly conserved, and is thus potentially useful as a vaccine agent and as a diagnostic agent in the diagnosis of infections with B. burgdorferi as are the characteristic nucleic acid fragments of the invention. Also disclosed are methods of producing the polypeptide antigen according to the invention as are antibodies directed against the antigen.

AN 2001:40233 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstom, Sven, Umea, Sweden
Barbour, Alan George, Irvine, CA, United States
PA Symbicom Aktiebolag, Umea, Sweden (non-U.S. corporation)
PI US 6204018 B1 20010320
WO 9535379 19951228
AI US 1997-750494 19970612 (8)
WO 1995-US7665 19950619
19970612 PCT 371 date
19970612 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1994-262220, filed on 20 Jun 1994, now patented, Pat. No. US 6054296
DT Utility
FS Granted
EXNAM Primary Examiner: Minnifield, Nita M.
LREP Frommer Lawrence & Haug LLP, Frommer, William S., Kolawski, Thomas J.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2159
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 59 OF 177 USPATFULL
AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyre disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.

AN 2001:32799 USPATFULL
TI Compositions and methods for the prevention and diagnosis of Lyme disease
IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 6197301 B1 20010306
AI US 1995-455829 19950531 (8)
RLI Division of Ser. No. US 1994-320161, filed on 7 Oct 1994, now patented, Pat. No. US 5747294 Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned Continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned Continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Bui, Phuong T.
LREP Fish & Neave, Haley, Jr., Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 86

ECL Exemplary Claim: 7
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2506
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 60 OF 177 USPATFULL
AB Methods for obtaining surface expression of a desired protein or polypeptide in Gram-positive host organisms are provided. In addition, vectors useful in such methods as well as Gram-positive host organisms transformed with such vectors are disclosed.
AN 2001:25429 USPATFULL
TI Materials and methods relating to the attachment and display of substances on cell surfaces
IN Steidler, Lothar, Ghent, Belgium
Remaut, Erik, Ghent, Belgium
Wells, Jeremy Mark, Cambridge, United Kingdom
PA Vlaams Interuniversitair Instituut voor Biotechnologie (VIB) vzw, Zwijnaarde, Belgium (non-U.S. corporation)
PI US 6190662 B1 20010220
AI US 1998-36609 19980306 (9)
RLI Continuation of Ser. No. WO 1996-GB2195, filed on 6 Sep 1996
PRAI GB 1995-18323 19950907
DT Utility
FS Granted
EXNAM Primary Examiner: Navarro, Albert
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 61 OF 177 USPATFULL
AB The 170 kDa adhesin subunit of the Entamoeba histolytica Gal/GalNAc adherence lectin is encoded by members of a gene family that includes hgl1, hgl2 and a newly discovered gene, hgl3. The DNA and encoded protein sequences of the hgl genes are disclosed. A number of proteins and peptide fragments of the adhesin as well as other functional derivatives, preferably produced by recombinant methods in prokaryotic cells are disclosed. A preferred peptide for a vaccine composition corresponds to amino acids 896-998 of the mature 170 kDa lectin and contains the galactose- and N-acetylgalactosamine-binding activity of the native lectin. These compositions are useful as immunogenic vaccine components and as diagnostic reagents. Methods are provided for a vaccine comprising one or more peptides of the lectin to immunize subjects at risk for infection by E. histolytica. Additionally, immunoassay methods are disclosed for measuring antibodies specific for an epitope of the lectin. These methods detect E. histolytica-specific antibodies, some of which are specific for epitopes characteristic of pathogenic strains, nonpathogenic strains, or both.
AN 2001:21758 USPATFULL
TI Recombinant Entamoeba histolytica lectin subunit peptides and reagents specific for members of the 170 kDa subunit multigene family
IN Mann, Barbara J., Charlottesville, VA, United States
Dodson, James M., Charlottesville, VA, United States
Petri, Jr., William A., Charlottesville, VA, United States
PA University of Virginia Patent Foundation, Charlottesville, VA, United States (U.S. corporation)
PI US 6187310 B1 20010213
AI US 1997-937236 19970916 (8)
RLI Continuation-in-part of Ser. No. US 569214 Continuation of Ser. No. US 1993-78476, filed on 17 Jun 1993, now abandoned Continuation of Ser. No. US 1993-130735, filed on 1 Oct 1993, now abandoned Continuation-in-part of Ser. No. US 1990-615719, filed on 21 Nov 1990, now patented, Pat. No.

US 5260429 Continuation-in-part of Ser. No. US 1993-75226, filed on 10 Jun 1993, now patented, Pat. No. US 5401831 Division of Ser. No. US 1990-479691, filed on 13 Feb 1990, now patented, Pat. No. US 5272058 Continuation-in-part of Ser. No. US 1989-456579, filed on 29 Dec 1989, now patented, Pat. No. US 5004608 Continuation of Ser. No. US 1988-143626, filed on 13 Jan 1988, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Kunz, Gary L.; Assistant Examiner: Gucker, Stephen
LREP Livnat, ShmuelRader, Fishman & Grauer
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 1988
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 62 OF 177 MEDLINE
AB Antimicrobial peptides are crucial for host defense at mucosal surfaces. Bacterial factors responsible for induction of human beta-defensin-2 (hBD-2) mRNA expression in Caco-2 human carcinoma cells were determined. **Salmonella** enteritidis, **Salmonella** typhimurium, **Salmonella** typhi, **Salmonella** dublin, and culture supernatants of these strains induced hBD-2 mRNA expression in Caco-2 human carcinoma cells. Using luciferase as a reporter gene for a approximately 2.1-kilobase pair hBD-2 promoter, the hBD-2-inducing factor in culture supernatant of S. enteritidis was isolated. The supernatant factor was heat-stable and proteinase-sensitive. After purification by anion exchange and gel filtration chromatography, the hBD-2-inducing factor was identified as a 53-kDa monomeric protein with the amino-terminal sequence AQVINTNSLSLLTQNNLNK, which is identical to that of the flagella filament structural protein (FliC) of S. enteritidis. Consistent with this finding, the 53-kDa protein reacted with anti-FliC antibody, which prevented its induction of hBD-2 mRNA in Caco-2 cells. In agreement, the hBD-2-inducing activity in culture supernatant was completely neutralized by anti-FliC antibody. In gel retardation analyses, FliC increased binding of NF-kappaB (p65 homodimer) to hBD-2 gene promoter sequences. We conclude that S. enteritidis FliC induces hBD-2 expression in Caco-2 cells via NF-kappaB activation and thus plays an important role in up-regulation of the innate immune response.
AN 2001460836 MEDLINE
DN 21380121 PubMed ID: 11387317
TI **Salmonella** enteritidis FliC (flagella filament protein) induces human beta-defensin-2 mRNA production by Caco-2 cells.
AU Ogushi K; Wada A; Niidome T; Mori N; Oishi K; Nagatake T; Takahashi A; Asakura H; Makino S; Hojo H; Nakahara Y; Ohsaki M; Hatakeyama T; Aoyagi H; Kurazono H; Moss J; Hirayama T
CS Department of Bacteriology, Nagasaki University, Sakamoto, Nagasaki 852-8523, Japan.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Aug 10) 276 (32) 30521-6. Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200109
ED Entered STN: 20010820
Last Updated on STN: 20030105
Entered Medline: 20010906

L4 ANSWER 63 OF 177 MEDLINE
AB **Flagellin**, the monomeric subunit of flagella, is an inducer of proinflammatory mediators. Bacterial **flagellin** genes have conserved domains (D1 and D2) at the N terminus and C terminus and a middle hypervariable domain (D3). To identify which domains induced

proinflammatory activity, r6-histidine (6HIS)-tagged fusion constructs were generated from the **Salmonella** dublin (SD) fliC **flagellin** gene. A full-length r6HIS SD **flagellin** (6HIS flag) induced IkappaBalpha loss poststimulation and NF-kappaB activation in Caco-2BBe cells and was as potent as native-purified SD **flagellin**. IFN-gamma-primed DLD-1 cells stimulated with 1 microg/ml of 6HIS flag induced high levels of NO (60 +/- 0.95 microM) comparable to the combination of IL-1beta and IFN-gamma (77 +/- 1.2) or purified native SD flag (66.3 +/- 0.98). Selected rSD **flagellin** proteins representing the D1, D2, or D3 domains alone or in combination were tested for proinflammatory properties. Fusion proteins representing the D3, amino, or carboxyl regions alone did not induce proinflammatory mediators. The results with a recombinant protein containing the amino D1 and D2 and carboxyl D1 and D2 separated by an Escherichia coli hinge (ND1-2/ECH/CD2) indicated that D1 and D2 were bioactive when coupled to an ECH element to allow protein folding. This chimera, but not the hinge alone, induced IkappaBalpha degradation, NF-kappaB activation, and NO and IL-8 production in two intestinal epithelial cell lines. ND1-2/ECH/CD2-1 also induced high levels of TNF-alpha (900 pg/ml) in human monocytes comparable to native SD **flagellin** (991.5 pg/ml) and 6HIS flag (987 pg/ml). The potent proinflammatory activity of **flagellin**, therefore, resides in the highly conserved N and C D1 and D2 regions.

AN 2001693269 MEDLINE
DN 21602086 PubMed ID: 11739521
TI **Salmonella flagellin**-dependent proinflammatory responses are localized to the conserved amino and carboxyl regions of the protein.
AU Eaves-Pyles T D; Wong H R; Odoms K; Pyles R B
CS Divisions of Critical Care Medicine, and Infectious Diseases, Children's Hospital Research Foundation, Cincinnati, OH 45229, USA..
tdeavesp@utmb.edu
NC K08HL0375 (NHLBI)
R01GM61723 (NIGMS)
T32AI07536 (NIAID)
SO JOURNAL OF IMMUNOLOGY, (2001 Dec 15) 167 (12) 7009-16.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200112
ED Entered STN: 20011217
Last Updated on STN: 20020919
Entered Medline: 20011227

L4 ANSWER 64 OF 177 MEDLINE
AB Invasion of the intestinal epithelium by **Salmonella** sp. requires a type III secretion system (TTSS) common in many bacterial pathogens. TTSS translocate effector proteins from bacteria into eukaryotic cells. These effectors manipulate cellular functions in order to benefit the pathogen. In the human and animal pathogen **Salmonella** typhimurium, the expression of genes encoding the secreted effector molecules Sip/Ssp ABCD, SigD, SptP and SopE requires both the AraC/XylS-like regulator InvF and the secretion chaperone SICA: In this work, an InvF binding site was identified in the promoter regions of three operons. SicA does not appear to affect InvF stability nor to bind DNA directly. However, SicA could be co-purified with InvF, suggesting that InvF and SicA interact with each other to activate transcription from the effector gene promoters. This is the first demonstration of a contact between a protein cofactor and an AraC/XylS family transcriptional regulator and, moreover, is the first direct evidence of an interaction between a transcriptional regulator and a TTSS chaperone. The regulation of effector genes described here for InvF and SicA may represent a new paradigm for regulation of virulence in a wide variety of pathogens.

AN 2001271542 MEDLINE
DN 21192025 PubMed ID: 11296219
TI Type III secretion chaperone-dependent regulation: activation of virulence genes by SicA and InvF in **Salmonella** typhimurium.
AU Darwin K H; Miller V L
CS Department of Molecular Microbiology, Washington University School of Medicine, St Louis, MO 63110, USA.
SO EMBO JOURNAL, (2001 Apr 17) 20 (8) 1850-62.
Journal code: 8208664. ISSN: 0261-4189.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010521

L4 ANSWER 65 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 7
AB The innate immune system recognizes pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, but not on the host. Toll-like receptors (TLRs) recognize PAMPs and mediate the production of cytokines necessary for the development of effective immunity. **Flagellin**, a principal component of bacterial flagella, is a virulence factor that is recognized by the innate immune system in organisms as diverse as flies, plants and mammals. Here we report that mammalian TLR5 recognizes bacterial **flagellin** from both Gram-positive and Gram-negative bacteria, and that activation of the receptor mobilizes the nuclear factor NF-kappaB and stimulates tumour necrosis factor-alpha production. TLR5-stimulating activity was purified from Listeria monocytogenes culture supernatants and identified as **flagellin** by tandem mass spectrometry. Expression of L. monocytogenes **flagellin** in non-flagellated Escherichia coli conferred on the bacterium the ability to activate TLR5, whereas **deletion** of the **flagellin** genes from **Salmonella** typhimurium abrogated TLR5-stimulating activity. All known TLRs signal through the adaptor protein MyD88. Mice challenged with bacterial **flagellin** rapidly produced systemic interleukin-6, whereas MyD88-null mice did not respond to **flagellin**. Our data suggest that TLR5, a member of the evolutionarily conserved Toll-like receptor family, has evolved to permit mammals specifically to detect flagellated bacterial pathogens.
AN 2001:256950 BIOSIS
DN PREV200100256950
TI The innate immune response to bacterial **flagellin** is mediated by Toll-like receptor 5.
AU Hayashi, Fumitaka; Smith, Kelly D.; Ozinsky, Adrian; Hawn, Thomas R.; Yi, Eugene C.; Goodlett, David R.; Eng, Jimmy K.; Akira, Shizuo; Underhill, David M.; Aderem, Alan (1)
CS (1) Institute for Systems Biology, 4225 Roosevelt Way NE, Suite 200, Seattle, WA, 98195: aderem@systemsbiology.org USA
SO Nature (London), (26 April, 2001) Vol. 410, No. 6832, pp. 1099-1103. print.
ISSN: 0028-0836.
DT Article
LA English
SL English

L4 ANSWER 66 OF 177 MEDLINE
AB Assembly of the long helical filament of the bacterial flagellum requires polymerisation of ca 20,000 **flagellin** (FliC) monomeric subunits into the growing structure extending from the cell surface. Here, we show that export of **Salmonella flagellin** is facilitated

specifically by a cytosolic protein, FliS, and that FliS binds to the FliC C-terminal helical domain, which contributes to stabilisation of **flagellin** subunit interactions during polymerisation. Stable complexes of FliS with **flagellin** were assembled efficiently in vitro, apparently by FliS homodimers binding to FliC monomers. The data suggest that FliS acts as a substrate-specific chaperone, preventing premature interaction of newly synthesised **flagellin** subunits in the cytosol. Compatible with this view, FliS was able to prevent in vitro polymerisation of FliC into filaments.

AN 2001288481 MEDLINE
DN 21226863 PubMed ID: 11327763
TI **Flagellin** polymerisation control by a cytosolic export chaperone.
AU Auvray F; Thomas J; Fraser G M; Hughes C
CS Department of Pathology, University of Cambridge, Tennis Court Road, Cambridge CB2 1QP, UK.
SO JOURNAL OF MOLECULAR BIOLOGY, (2001 Apr 27) 308 (2) 221-9.
Journal code: 2985088R. ISSN: 0022-2836.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200105
ED Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010524

L4 ANSWER 67 OF 177 USPATFULL
AB Provided is a fusion molecule comprising a DNA sequence encoding a thioredoxin-like protein fused to a DNA sequence encoding a second peptide or protein. The peptide or protein may be fused to the amino terminus of the thioredoxin-like molecule, the carboxyl terminus of the thioredoxin-like molecule, or within the thioredoxin-like molecule, for example at the active-site loop of the molecule. The fusion molecule may be modified to introduce one or more metal-binding/chelating amino-acid residues to aid in purification. Expression of this fusion molecule under the control of a regulatory sequence capable of directing its expression in a desired host cell, produces high levels of stable and soluble fusion protein. The fusion protein, located in the bacterial cytoplasm, may be selectively released from the cell by osmotic shock or freeze/thaw procedures. It may be optionally cleaved to liberate the soluble, correctly folded heterologous protein from the thioredoxin-like portion.
AN 2000:149944 USPATFULL
TI Peptide and protein fusions to thioredoxin, thioredoxin-like molecules, and modified thioredoxin-like molecules
IN McCoy, John, Reading, MA, United States
DiBlasio-Smith, Elizabeth, Tyngsboro, MA, United States
Grant, Kathleen, Salem, MA, United States
LaVallie, Edward R., Tewksbury, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 6143524 20001107
AI US 1997-810436 19970304 (8)
RLI Division of Ser. No. US 1993-165301, filed on 10 Dec 1993, now patented, Pat. No. US 5646016 which is a continuation-in-part of Ser. No. US 1992-921848, filed on 28 Jul 1992, now patented, Pat. No. US 5292646, issued on 8 Mar 1994 which is a continuation-in-part of Ser. No. US 1991-745382, filed on 14 Aug 1991, now patented, Pat. No. US 5270181, issued on 14 Dec 1993 which is a continuation-in-part of Ser. No. US 1991-652531, filed on 6 Feb 1991, now abandoned
DT Utility
FS Granted

EXNAM Primary Examiner: Walsh, Stephen; Assistant Examiner: Mertz, Prema
LREP Lazar, Steven R.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 2534
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 68 OF 177 USPATFULL
AB This invention relates to mutant strains of gram-negative bacteria that constitutively secrete proteins via the type III secretion machinery. It also relates to methods of identifying molecules that are able to activate or inhibit secretion in wild-type strains of gram-negative bacteria by exposing gram-negative bacterial cells to a sample molecule, wherein said bacterial cells contain a reporter gene transcriptionally fused to a promoter of a gene activated or regulated by the type III secretion machinery, and detecting the presence or activity of the product of the reporter gene.
AN 2000:142109 USPATFULL
TI Method for screening for inhibitors and activators of type III secretion machinery in gram-negative bacteria
IN Demers, Brigitte, Paris, France
Sansonetti, Philippe J., Paris, France
Parsot, Claude, Paris, France
PA Institut Pasteur, Paris, France (non-U.S. corporation)
Institut Nationale de la Sante et de la Recherche, Paris, France (non-U.S. corporation)
PI US 6136542 20001024
AI US 1999-306756 19990507 (9)
PRAI US 1998-85234P 19980513 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Ketter, James
LREP Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 946
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 69 OF 177 USPATFULL
AB The present invention is directed to recombinant genes and their encoded proteins which are recombinant **flagellin** fusion proteins. Such fusion proteins comprise amino acid sequences specifying an epitope encoded by a **flagellin** structural gene and an epitope of a heterologous organism which is immunogenic upon introduction of the fusion protein into a vertebrate host. The recombinant genes and proteins of the present invention can be used in vaccine formulations, to provide protection against infection by the heterologous organism, or to provide protection against conditions or disorders caused by an antigen of the organism. In a specific embodiment, attenuated invasive bacteria expressing the recombinant **flagellin** genes of the invention can be used in live vaccine formulations. The invention is illustrated by way of examples in which epitopes of malaria circumsporozoite antigens, the B subunit of Cholera toxin, surface and presurface antigens of Hepatitis B. VP7 polypeptide of rotavirus, envelope glycoprotein of HIV, and M protein of Streptococcus, are expressed in recombinant **flagellin** fusion proteins which assemble into functional flagella, and which provoke an immune response directed against the heterologous epitope, in a vertebrate host.
AN 2000:134749 USPATFULL
TI Recombinant **flagellin** vaccines
IN Majarian, William R., Mt. Royal, NJ, United States
Stocker, Bruce A. D., Palo Alto, CA, United States

Newton, Salete M. C., Mountain View, CA, United States
PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)
The Board of Trustees of the Leland Stanford Junior University, Stanford, CA, United States (U.S. corporation)
PI US 6130082 20001010
AI US 1992-837668 19920214 (7)
RLI Continuation of Ser. No. US 1989-348430, filed on 5 May 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-190570, filed on 5 May 1988, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Mosher, Mary E.
LREP Hamilton, Brook, Smith & Reynolds, P.C.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 15 Drawing Figure(s); 17 Drawing Page(s)
LN.CNT 2404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 70 OF 177 USPATFULL
AB The invention relates to novel Borrelia, and OspA antigens derived therefrom. These antigens show little homology with known OspA's and are therefore useful as vaccine and diagnostic reagents. Multicomponent vaccines based on OspA's from different Borrelia groups are also disclosed.
AN 2000:117295 USPATFULL
TI Osp A proteins of Borrelia burgdorferi subgroups, encoding genes and vaccines
IN Lobet, Yves, Rixensart, Belgium
Simon, Markus, Frieburg, Germany, Federal Republic of
Schaible, Ulrich, Frieburg, Germany, Federal Republic of
Wallich, Reinhard, Heidelberg, Germany, Federal Republic of
Kramer, Michael, Frieburg, Germany, Federal Republic of
PA Smithkline Beecham Biologicals (S.A.), Rixensart, Belgium (non-U.S. corporation)
PI US 6113914 20000905
WO 9304175 19930304
AI US 1994-193159 19940705 (8)
WO 1992-EP1827 19920811
19940705 PCT 371 date
19940705 PCT 102(e) date
PRAI GB 1991-17602 19910815
GB 1991-22301 19911021
GB 1992-11317 19920528
GB 1992-11318 19920528
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Dustman, Wayne J., King, William T., Kinzig, Charles M.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1443
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 71 OF 177 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at

least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.

AN 2000:91741 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Umea, Sweden (non-U.S. corporation)
PI US 6090586 20000718
AI US 1995-468878 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994 which is a continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawrence & Haug LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3064
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 72 OF 177 USPATFULL
AB A protein associated with adherence and invasion of Campylobacter spp. including C. jejuni and C. coli is provided. Methods are disclosed for detecting Campylobacter spp. including C. jejuni and C. coli in a biological sample by determining the presence of the protein or a nucleic acid molecule encoding the protein in the sample. Compositions for treatment of infections diseases and vaccines are also described.
AN 2000:87935 USPATFULL
TI Gene encoding invasion protein of campylobacter species
IN Chan, Voon Loong, 93 Elm Ridge Drive, Toronto, Ontario, Canada M6B 1A6
Joe, Angela, #1122, 341 Bloor Street West, Toronto, Ontario, Canada M5S 1N8
Hong, Yuwen, 300 Regina Street North, Waterloo, Ontario, Canada N2J 4H2
PI US 6087105 20000711
AI US 1998-56783 19980408 (9)
PRAI US 1997-43414P 19970408 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Bereskin & Parr
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 73 OF 177 USPATFULL
AB Compositions and methods for detecting the conversion to mucoidy in Pseudomonas aeruginosa are disclosed. Chronic respiratory infections with mucoid Pseudomonas aeruginosa are the leading cause of high mortality and morbidity in cystic fibrosis. The initially colonizing strains are nonmucoid but in the cystic fibrosis lung they invariably convert into the mucoid form causing further disease deterioration and poor prognosis. Mucoidy is a critical P. aeruginosa virulence factor in cystic fibrosis that has been associated with biofilm development and

resistance to phagocytosis. The molecular basis of this conversion to mucoidy is also disclosed. The present invention provides for detecting the switch from nonmucoid to mucoid state as caused by either frameshift **deletions** and duplications or nonsense changes in the second gene of the cluster, mucA. Inactivation of mucA results in constitutive expression of genes, such as algD, dependent on algU for transcription. Also disclosed is a novel alginate biosynthesis heterologous expression system for use in screening candidate substances that inhibit conversion to mucoidy.

AN 2000:84032 USPATFULL
TI Detection of conversion to mucoidy in Pseudomonas aeruginosa infecting cystic fibrosis patients
IN Deretic, Vojo, San Antonio, TX, United States
Martin, Daniel W., Palo Alto, CA, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6083691 20000704
AI US 1995-505307 19951124 (8)
RLI Continuation-in-part of Ser. No. US 1993-17114, filed on 12 Feb 1993, now patented, Pat. No. US 5591838
DT Utility
FS Granted
EXNAM Primary Examiner: Houtteman, Scott W.
LREP Arnold, White & Durkee
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 22 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 3355
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 74 OF 177 USPATFULL
AB This invention relates to flagella-less strains of Borrelia and to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.

AN 2000:77033 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio G., Newbury Park, CA, United States
Sadziene, Adriadna, San Antonio, TX, United States
PA The University of Texas System, Board of Regents, Austin, TX, United States (U.S. corporation)
PI US 6077515 20000620
AI US 1996-696372 19960813 (8)
RLI Continuation of Ser. No. US 1993-124290, filed on 20 Sep 1993, now patented, Pat. No. US 5585102, issued on 17 Dec 1996 which is a continuation of Ser. No. US 1991-641143, filed on 11 Jan 1991, now patented, Pat. No. US 5436000, issued on 25 Jul 1995
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Arnold White & Durkee
CLMN Number of Claims: 5

ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1355

L4 ANSWER 75 OF 177 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.
AN 2000:67433 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Ulmea, Sweden (non-U.S. corporation)
PI US 6068842 20000530
AI US 1995-471733 19950606 (8)
RLI Division of Ser. No. US 1994-262220, filed on 20 Jun 1994 which is a continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US 1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawerence & Haug LLP
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3138
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 76 OF 177 USPATFULL
AB The present invention relates to nucleic acid molecules, polypeptides encoded by the same, antibodies directed thereto and a method of preparing such polypeptides including: (a) inserting an isolated DNA molecule coding for a polypeptide which is immunoreactive with a 66 kDa polypeptide derived from Borrelia garinii IP90 into an expression vector; (b) transforming a host organism or cell with the vector; (c) culturing the transformed host cell under suitable conditions; and (d) harvesting the polypeptide. The isolated DNA molecule is preferably at least 10 nucleotides in length, and the method may optionally include subjecting the polypeptide to post-translational modification. The host cell can be a bacterium, a yeast, a protozoan, or a cell derived from a multicellular organism such as a fungus, an insect cell, a plant cell, or a mammalian cell.
AN 2000:50546 USPATFULL
TI 66 kDa antigen from Borrelia
IN Bergstrom, Sven, Umea, Sweden
Barbour, Alan George, San Antonio, TX, United States
PA Symbicom AB, Umea, Sweden (non-U.S. corporation)
PI US 6054296 20000425
AI US 1994-262220 19940620 (8)
RLI Continuation-in-part of Ser. No. US 1993-79601, filed on 22 Jun 1993, now patented, Pat. No. US 5523089 which is a continuation of Ser. No. US

1992-924798, filed on 6 Aug 1992, now abandoned which is a continuation of Ser. No. US 1989-422881, filed on 18 Oct 1989, now abandoned
PRAI DK 1988-5902 19881024
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Frommer, Esq., William S., Kowalski, Esq., Thomas J.Frommer Lawrence & Haug LLP
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 3433
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 77 OF 177 USPATFULL
AB This invention relates to methods and compositions for producing a fusion protein comprised of Haemophilus influenzae P2 amino acid sequences, wherein in place of loop 5, or a portion thereof, is displayed a heterologous or homologous peptide sequence having biological activity. The fusion protein may be expressed on the surface of the host cell, such as in H. influenzae, which has been transformed with a fusion sequence that is operatively linked to at least one regulatory control element for expression of the fusion protein. Alternatively, the fusion protein can be purified from the host cell in the expression system, if the fusion protein remains associated with the host cell; or from the media of the expression system, if the fusion protein is a secreted form.
AN 2000:27773 USPATFULL
TI Peptide expression and delivery system
IN Murphy, Timothy F., East Amherst, NY, United States
Yi, Kyungcheol, Lilburn, GA, United States
PA Research Foundation of State University of New York, Amherst, NY, United States (U.S. corporation)
PI US 6033877 20000307
AI US 1996-740644 19961031 (8)
PRAI US 1996-6168P 19961102 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Guzo, David; Assistant Examiner: Larson, Thomas G.
LREP Hodgson, Russ, Andrews, Woods & Goodyear LLP
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1436
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 78 OF 177 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a basal body rod protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the basal body rod protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlgF or FlgG proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.
AN 2000:12588 USPATFULL
TI Basal body rod protein FlgF of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA Connaught Laboratories Limited, North York, Canada (non-U.S. corporation)
PI US 6020125 20000201
AI US 1995-483857 19950607 (8)
RLI Continuation of Ser. No. US 1995-436748, filed on 8 May 1995, now

patented, Pat. No. US 5827654
DT Utility
FS Granted
EXNAM Primary Examiner: Chin, Christopher L.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1392
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 79 OF 177 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Camplylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 2000:4664 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Dr., Toronto Ontario M6B 1A6, Canada
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto Ontario M3A 1H8, Canada
PI US 6013501 20000111
AI US 1997-853552 19970509 (8)
RLI Division of Ser. No. US 1995-485216, filed on 7 Jun 1995, now patented, Pat. No. US 5695960 which is a continuation of Ser. No. WO 1994-CA270, filed on 13 May 1994 which is a continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Saidha, Tekchand
LREP Merchant & Gould
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1677
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 80 OF 177 MEDLINE
AB The serine-threonine kinase Akt is a protooncogene involved in the regulation of cell proliferation and survival. Activation of Akt is initiated by binding to the phospholipid products of phosphoinositide 3-kinase at the inner leaflet of the plasma membranes followed by phosphorylation at Ser(473) and Thr(308). We have found that Akt is activated by **Salmonella** enterica serovar Typhimurium in epithelial cells. A bacterial effector protein, SigD, which is translocated into host cells via the specialized type III secretion system, is essential for Akt activation. In HeLa cells, wild type S. typhimurium induced translocation of Akt to membrane ruffles and phosphorylation at residues Thr(308) and Ser(473) and increased kinase activity. In contrast, infection with a SigD **deletion** mutant did not induce phosphorylation or activity although Akt was translocated to membrane ruffles. Complementation of the SigD **deletion** strain with a mutant containing a single Cys to Ser mutation (C462S), did not restore the Akt activation phenotype. This residue has previously been shown to be essential for inositol phosphatase activity of the SigD homologue, SopB. Our data indicate a novel mechanism of Akt activation in which the endogenous cellular pathway does not convert membrane-associated Akt into its active form. SigD is also the first bacterial effector to be identified as an activator of Akt.
AN 2001078286 MEDLINE
DN 20545517 PubMed ID: 10978351
TI Activation of Akt/protein kinase B in epithelial cells by the **Salmonella** typhimurium effector sigD.

AU Steele-Mortimer O; Knodler L A; Marcus S L; Scheid M P; Goh B; Pfeifer C G; Duronio V; Finlay B B
CS Biotechnology Laboratory and Department of Medicine, University of British Columbia, Vancouver, British Columbia V6T 1Z3, Canada.. osteelem@cellbio.wustl.edu
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Dec 1) 275 (48) 37718-24. Journal code: 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200101
ED Entered STN: 20010322
Last Updated on STN: 20020420
Entered Medline: 20010111

L4 ANSWER 81 OF 177 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 8
AB Gene expression of the flagellar system is tightly controlled by external stimuli or intracellular signals. A general picture of this regulation has been obtained from studies of **Salmonella** enterica serovar Typhimurium. However, these regulatory mechanisms do not apply to all bacterial groups. In this study, we have investigated regulation of the flagellar genetic system in Rhodobacter sphaeroides. **Deletion** anal., site-directed mutagenesis, and 5'-end mapping were conducted in order to identify the fliO promoter. Our results indicate that this promoter is recognized by the factor .sigma.54. Addnl., 5'-end mapping of the flgB and fliK transcripts suggests that these mRNAs are also transcribed from .sigma.54 promoters. Finally, we showed evidence that suggests that fliC transcription is not entirely dependent on the presence of a complete basal body-book structure. Our results are discussed in the context of a possible regulatory hierarchy controlling flagellar gene expression in R. sphaeroides.
AN 2000:722114 CAPLUS
DN 134:173761
TI .sigma.54 promoters control expression of genes encoding the hook and basal body complex in Rhodobacter sphaeroides
AU Poggio, Sebastian; Aguilar, Carlos; Osorio, Aurora; Gonzalez-Pedrajo, Bertha; Dreyfus, Georges; Camarena, Laura
CS Departamento de Biologia Molecular, Instituto de Investigaciones Biomedicas, Mexico City, 04510, Mex.
SO Journal of Bacteriology (2000), 182(20), 5787-5792 CODEN: JOBAAY; ISSN: 0021-9193
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 82 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 9
AB Flagellar motility in Rhodobacter sphaeroides is notably different from that in other bacteria. R. sphaeroides moves in a series of runs and stops produced by the intermittent rotation of the flagellar motor. R. sphaeroides has a single, plain filament whose conformation changes according to flagellar motor activity. Conformations adopted during swimming include coiled, helical, and apparently straight forms. This range of morphological transitions is larger than that in other bacteria, where filaments alternate between left- and right-handed helical forms. The polymorphic ability of isolated R. sphaeroides filaments was tested in vitro by varying pH and ionic strength. The isolated filaments could form open-coiled, straight, normal, or curly conformations. The range of transitions made by the R. sphaeroides filament differs from that reported for **Salmonella** enterica serovar Typhimurium. The sequence of the R. sphaeroides fliC gene, which encodes the **flagellin** protein,

was determined. The gene appears to be controlled by a sigma28-dependent promoter. It encodes a predicted peptide of 493 amino acids. Serovar Typhimurium mutants with altered polymorphic ability usually have amino acid changes at the terminal portions of **flagellin** or a **deletion** in the central region. There are no obvious major differences in the central regions to explain the difference in polymorphic ability. In serovar Typhimurium filaments, the termini of **flagellin** monomers have a coiled-coil conformation. The termini of R. sphaeroides **flagellin** are predicted to have a lower probability of coiled coils than are those of serovar Typhimurium **flagellin**. This may be one reason for the differences in polymorphic ability between the two filaments.

AN 2000:419529 BIOSIS
DN PREV200000419529
TI The flagellar filament of Rhodobacter sphaeroides: pH-induced polymorphic transitions and analysis of the fliC gene.
AU Shah, Deepan S. H.; Perehinec, Tania; Stevens, Susan M.; Aizawa, Shin-Ichi; Sockett, R. Elizabeth (1)
CS (1) Institute of Genetics, University of Nottingham, Queens Medical Centre, Nottingham, NG7 2UH UK
SO Journal of Bacteriology, (September, 2000) Vol. 182, No. 18, pp. 5218-5224. print.
ISSN: 0021-9193.
DT Article
LA English
SL English

L4 ANSWER 83 OF 177 CAPLUS COPYRIGHT 2003 ACS
AB Vibrio parahaemolyticus possesses two types of flagella, polar and lateral, powered by distinct energy sources, which are derived from the sodium and proton motive forces, resp. Although proton-powered flagella in Escherichia coli and **Salmonella** enterica serovar Typhimurium have been extensively studied, the mechanism of torque generation is still not understood. Mol. knowledge of the structure of the sodium-driven motor is only now being developed. In this work, we identify the switch components, FliG, FliM, and FliN, of the sodium-type motor. This brings the total no. of genes identified as pertinent to polar motor function to seven. Both FliM and FliN possess charged domains not found in proton-type homologs; however, they can interact with the proton-type motor of E. coli to a limited extent. Residues known to be crit. for torque generation in the proton-type motor are conserved in the sodium-type motor, suggesting a common mechanism for energy transfer at the rotor-stator interface regardless of the driving force powering rotation. Mutants representing a complete panel of insertionally inactivated switch and motor genes were constructed. All of these mutants were defective in sodium-driven swimming motility. Alk. phosphatase could be fused to the C termini of MotB and MotY without abolishing motility, whereas **deletion** of the unusual, highly charged C-terminal domain of FliM disrupted motor function. All of the mutants retained proton-driven, lateral motility over surfaces. Thus, although central chemotaxis genes are shared by the polar and lateral systems, genes encoding the switch components, as well as the motor genes, are distinct for each motility system.

AN 2000:101952 CAPLUS
DN 132:290857
TI Insertional inactivation of genes encoding components of the sodium-type flagellar motor and switch of Vibrio parahaemolyticus
AU Boles, Blaise R.; McCarter, Linda L.
CS Department of Microbiology, University of Iowa, Iowa City, IA, 52242, USA
SO Journal of Bacteriology (2000), 182(4), 1035-1045
CODEN: JOBAAY; ISSN: 0021-9193
PB American Society for Microbiology
DT Journal
LA English

RE.CNT 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 84 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB SigD and SigE (**Salmonella** invasion gene) are proteins needed for optimal invasion of **Salmonella** typhimurium into eukaryotic cells in vitro. SigD is a secreted protein and SigE is a putative chaperone required for SigD stability and/or secretion. SigD is secreted by a type III secretion apparatus encoded within a pathogenicity island on the **Salmonella** chromosome known as **Salmonella** pathogenicity island 1 (SPI1). The expression of sigDE, which is not linked to SPI1, is co-ordinately regulated with the SPI1 genes and is dependent on the transcriptional regulators SirA, HilA and InvF. These three proteins alone are unable to activate transcription from the sigD promoter in Escherichia coli, therefore it is likely that other factors are needed for expression. A screen for genes required for the expression of a sigD-lacZYA reporter fusion found a mutant with a transposon insertion in spaS, an SPI1 gene which encodes a putative inner-membrane component of the type III secretion system. The expression of a SPI1 operon encoding a putative chaperone (SicA) and several secreted proteins (Sips B, C, D and A) was also reduced in this mutant. The regulation defect of the spaS mutant was complemented by sicA and not by spaS. Because sicA is encoded immediately downstream of spaS, the mutation in spaS was likely to be polar on the expression of sicA. In addition, a sicA disruption mutant was as defective as an invF **deletion** mutant for the expression of sigD, sicA and sipC reporter fusions. The introduction of plasmids encoding invF and sicA into a non-pathogenic E. coli K-12 strain stimulated the transcription of both a sicA- and a sigD-lacZYA promoter fusion. This result suggests that InvF and SicA are sufficient for the expression of these genes. This is the first demonstration of a positive regulatory role for a putative type III secretion system chaperone in the expression of virulence genes.
AN 2000:188754 SCISEARCH
GA The Genuine Article (R) Number: 289MN
TI The putative invasion protein chaperone SicA acts together with InvF to activate the expression of **Salmonella** typhimurium virulence genes
AU Darwin K H; Miller V L (Reprint)
CS WASHINGTON UNIV, SCH MED, DEPT MOL MICROBIOL, 660 S EUCLID AVE, CAMPUS BOX 8230, ST LOUIS, MO 63110 (Reprint); WASHINGTON UNIV, SCH MED, DEPT MOL MICROBIOL, ST LOUIS, MO 63110
CYA USA
SO MOLECULAR MICROBIOLOGY, (FEB 2000) Vol. 35, No. 4, pp. 949-959.
Publisher: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 0NE, OXON, ENGLAND.
ISSN: 0950-382X.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 65
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 85 OF 177 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Campylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 1999:141596 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Drive, Toronto Ontario, Canada M6B 1A6
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto Ontario, Canada M3A 1H8
PI US 5981189 19991109

AI US 1998-3245 19980106 (9)
RLI Division of Ser. No. US 1997-853552, filed on 9 May 1997 which is a division of Ser. No. US 1995-485216, filed on 7 Jun 1995, now patented, Pat. No. US 5695960 which is a continuation of Ser. No. WO 1994-CA270, filed on 13 May 1994 which is a continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Achutamurthy, Ponnathapura; Assistant Examiner: Saidha, Tekchand
LREP Merchant & Gould
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1711
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 86 OF 177 USPATFULL
AB A class of carrier molecules which when covalently linked to an immunogen enhances the host's immune response to that immunogen, regardless of whether the complex of carrier and immunogen is administered parenterally, enterally, or orally to the host. Also provided are processes for production of the complexes, as well as hybrid DNA sequences encoding the complexes, recombinant DNA molecules bearing the hybrid DNA sequences, transformed hosts and vaccines comprising the complexes, and methods for production of the vaccine.
AN 1999:136988 USPATFULL
TI Immunopotentiation through covalent linkage between immunogen and immunopotentiating molecules
IN Barnes, Thomas Michael, Lane Cove, Australia
Lehrbach, Philip Ralph, Wahroonga, Australia
Russell-Jones, Gregory John, Middle Cove, Australia
PA Bioenterprises PTY Limited, Roseville, Australia (non-U.S. corporation)
PI US 5976839 19991102
AI US 1995-461003 19950605 (8)
RLI Division of Ser. No. US 1992-903121, filed on 23 Jun 1992, now abandoned which is a continuation of Ser. No. US 1987-159968, filed on 21 Feb 1987, now abandoned
PRAI AU 1987-846 19870313
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.; Assistant Examiner: Navarro, Mark
LREP Foley & Lardner
CLMN Number of Claims: 18
ECL Exemplary Claim: 2
DRWN 14 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 690
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 87 OF 177 USPATFULL
AB This invention pertains to a complementation system for the selection and maintenance of expressed genes in bacterial hosts. The invention provides stable vectors which can be selected and maintained by complementation of chromosomal **deletion** mutations of purA (adenylosuccinate synthetase), obviating the use of antibiotic resistance genes. This system is useful in production organisms during fermentation and in live vaccine bacteria, such as attenuated **Salmonella** typhi. This system allows for selection of chromosomal integrants and for selection and stable plasmid maintenance in the vaccinated host without application of external selection pressure.
AN 1999:120887 USPATFULL
TI Stable pura vectors and uses therefor
IN Brey, Robert N., Rochester, NY, United States

Fulginiti, James P., Canandaigua, NY, United States
Anilionis, Algis, Pittsford, NY, United States
PA Praxis Biologics, Inc., West Henrietta, NJ, United States (U.S. corporation)
PI US 5961983 19991005
AI US 1995-448907 19950524 (8)
RLI Division of Ser. No. US 1995-380297, filed on 30 Jan 1995 which is a continuation of Ser. No. US 1994-204903, filed on 2 Mar 1994, now abandoned which is a continuation of Ser. No. US 1991-695706, filed on 3 May 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Brusca, John S.
LREP Hamilton, Brook, Smith & Reynolds, P.C.
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1389
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 88 OF 177 USPATFULL
AB The invention relates to novet Borrelia, and OspA antigens derived therefrom. These antigens show little homology with known OspA's and are therefore useful as vaccine and diagnostic reagents. Multicomponent vaccines based on OspA's from different Borrelia groups are also disclosed.
AN 1999:99384 USPATFULL
TI Osp A proteins of Borrelia burgdorferi subgroups, encoding genes and vaccines
IN Lobet, Yves, Rixensart, Belgium
Simon, Markus, Frieburg, Germany, Federal Republic of
Schaible, Ulrich, Frieburg, Germany, Federal Republic of
Wallich, Reinhard, Heidelberg, Germany, Federal Republic of
Kramer, Michael, Frieburg, Germany, Federal Republic of
PA SmithKline Beecham Biologicals, United Kingdom (non-U.S. corporation)
Max-Planck-Gesellschaft zur Forderung der Wissenschafter e.V., Germany, Federal Republic of (non-U.S. corporation)
Duetsches Krebsforschungszentrum Stiftung des offentlichen Rechts, Germany, Federal Republic of (non-U.S. corporation)
PI US 5942236 19990824
AI US 1995-441857 19950516 (8)
RLI Continuation of Ser. No. US 193159
PRAI GB 1991-17602 19910815
GB 1991-22301 19911021
GB 1992-11317 19920528
GB 1992-11318 19920528
DT Utility
FS Granted
EXNAM Primary Examiner: Minnifield, Nita
LREP Dustman, Wayne J., King, William T., Kinzig, Charles M.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 89 OF 177 USPATFULL
AB Bites from Amblyomma americanum, a hard tick, have been associated with a Lyme disease-like illness in the southeastern and south-central United States. Present in 2% of ticks collected in four states were uncultivable spirochetes. Through use of the polymerase chain reaction, partial sequences of the **flagellin** and 16s rRNA genes of microorganisms from Texas and New Jersey were obtained. The sequences showed that the spirochete was a Borrelia sp. but distinct from other

known members of this genus, including B. burgdorferi, the agent of Lyme disease. Species-specific differences in the sequences of the **flagellin** protein, the **flagellin** gene and the 16s rRNA gene between the new Borrelia species and previously known species provide compositions and methods for assay for determining the presence of this new spirochete, or for providing evidence of past or present infection by this spirochete in animal reservoirs and humans.

AN 1999:88799 USPATFULL
TI Diagnostic tests for a new spirochete, Borrelia lonestari sp. nov.
IN Barbour, Alan G., San Antonio, TX, United States
Carter, Carol, Bulverde, TX, United States
PA Board of Regents University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5932220 19990803
AI US 1995-437013 19950508 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Ryan, V.
LREP Arnold White & Durkee
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 2343
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 90 OF 177 USPATFULL
AB This invention pertains to a complementation system for the selection and maintenance of expressed genes in bacterial hosts. The invention provides stable vectors which can be selected and maintained by complementation of chromosomal **deletion** mutations of purA (adenylosuccinate synthetase), obviating the use of antibiotic resistance genes. This system is useful in production organisms during fermentation and in live vaccine bacteria, such as attenuated **Salmonella** typhi. This system allows for selection of chromosomal integrants and for selection and stable plasmid maintenance in the vaccinated host without application of external selection pressure.

AN 1999:75520 USPATFULL
TI Stable purA vectors and uses therefor
IN Brey, Robert N., Rochester, NY, United States
Fulginiti, James P., Canandaigua, NY, United States
Anilionis, Algis, Pittsford, NY, United States
PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)
PI US 5919663 19990706
AI US 1995-380297 19950130 (8)
RLI Continuation of Ser. No. US 1994-204903, filed on 2 Mar 1994, now abandoned which is a continuation of Ser. No. US 1991-695706, filed on 3 May 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Ketter, James; Assistant Examiner: Brusca, John S.
LREP Hamilton, Brook, Smith & Reynolds,P.C.
CLMN Number of Claims: 41
ECL Exemplary Claim: 8
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 91 OF 177 USPATFULL
AB A growth supplement for bacterial media is used to induce and/or maintain differentiation and viability of bacterial cell cultures. The supplement contains about 10 mM to about 100 mM of a sugar, an amino acid or mixtures thereof. When the media used does not contain iron and reducing agents, such as sodium thiosulfate, these are included in the

supplement. The reducing agent is present preferably at about 20 to about 40 mM. The addition of this supplement results in flagellation of aflagellate variants of **Salmonella** and hyperflagellation of variants of **Salmonella** which are flagellated.

AN 1999:56414 USPATFULL
TI Complex growth supplement for maintenance of bacterial cell viability and induction of bacterial cell differentiation
IN Petter, Jean Guard, Athens, GA, United States
Ingram, Kim D., Watkinsville, GA, United States
PA The United States of America as represented by the Secretary of Agriculture, Washington, DC, United States (U.S. government)
PI US 5902742 19990511
AI US 1996-649501 19960517 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Lankford, Jr., Leon B.; Assistant Examiner: Tate, Christopher R.
LREP Silverstein, M. Howard, Fado, John, Poulos, Gail E.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 847
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 92 OF 177 USPATFULL
AB A fusion protein which comprises the B subunit of the labile toxin (LT-B) of E. coli and part of the **flagellin** (flaA) protein of C. jejuni is antigenic and is useful for decreasing colonization in chickens by Campylobacter species. The protein is produced by E. coli cells, transformed by the plasmid pBEB into which DNA sequences encoding the novel protein have been introduced.

AN 1999:40230 USPATFULL
TI Campylobacteri jejuni **flagellin**-escherichia coli LT-B fusion protein
IN Meinersmann, Richard J., Lithonia, GA, United States
Khoury, Christian A., Philadelphia, PA, United States
PA The United States of America as represented by the Secretary of Agriculture, Washington, DC, United States (U.S. government)
PI US 5888810 19990330
AI US 1997-784218 19970116 (8)
RLI Division of Ser. No. US 1993-150305, filed on 12 Nov 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.
LREP Silverstein, M. Howard, Fado, John, Graeter, Janelle S.
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 805
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 93 OF 177 USPATFULL
AB Class of carrier molecules which when covalently linked to an immunogen enhances the host's immune response to that immunogen regardless of whether the complex of carrier and immunogen is administered parenterally, enterally, or orally to the host. In addition, processes are provided for production of the complexes, as well as hybrid DNA sequences encoding complexes, recombinant DNA molecules bearing the hybrid DNA sequences, transformant hosts and vaccines comprising the complexes as well as methods for production of the vaccine.

AN 1999:24309 USPATFULL
TI Immunopotentiating complexes comprising TraT proteins
IN Barnes, Thomas Michael, Lane Cove, Australia
Lehrbach, Philip Ralph, Wahroonga, Australia

Russell-Jones, Gregory John, Middle Cove, Australia
PA Bioenterprises Pty Limited, East Roseville, Australia (non-U.S. corporation)
PI US 5874083 19990223
AI US 1995-461324 19950605 (8)
RLI Continuation of Ser. No. US 1992-903121, filed on 23 Jun 1992, now abandoned which is a continuation of Ser. No. US 1987-159968, filed on 21 Dec 1987, now abandoned
PRAI AU 1986-5559 19860421
AU 1987-846 19870313
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Foley & Lardner
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 822
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 94 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB The .sigma. subunit of RNA polymerase is a critical factor in positive control of transcription initiation. Primary .sigma. factors are essential proteins required for vegetative growth, whereas alternative .sigma. factors mediate transcription in response to various stimuli. Late gene expression during flagellum biosynthesis in **Salmonella** typhimurium is dependent upon an alternative .sigma. factor, .sigma.28, the product of the fliA gene. We have characterized the intermediate complexes formed by .sigma.28 holoenzyme on the pathway to open complex formation. Interactions with the promoter for the **flagellin** gene fliC were analyzed using DNase I and KMnO4 footprinting over a range of temperatures. We propose a model in which closed complexes are established in the upstream region of the promoter, including the -35 element, but with little significant contact in the -10 element or downstream regions of the promoter. An isomerization event extends the DNA contacts into the -10 element and the start site, with loss of the most distal upstream contacts accompanied by DNA melting to form open complexes. Melting occurs efficiently even at 16 .degree.C. Once open complexes have formed, they are unstable to heparin challenge even in the presence of nucleoside triphosphates, which have been observed to stabilize open complexes at rRNA promoters.
AN 1999126147 EMBASE
TI Transcription initiation at the **flagellin** promoter by RNA polymerase carrying .sigma.28 from **Salmonella** typhimurium.
AU Schaubach O.L.; Dombroski A.J.
CS A.J. Dombroski, Dept. of Microbiol./Molec. Genetics, Univ. of Texas Health Science Center, 6431 Fannin, Houston, TX 77030, United States. dombros@utmmg.med.uth.tmc.edu
SO Journal of Biological Chemistry, (26 Mar 1999) 274/13 (8757-8763). Refs: 57
ISSN: 0021-9258 CODEN: JBCHA3
CY United States
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L4 ANSWER 95 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The biogenesis of the polar flagellum of Caulobacter crescentus is regulated by the cell cycle as well as by a trans-acting regulatory hierarchy that functions to couple flagellum assembly to gene expression. The assembly of early flagellar structures (MS ring, switch, and flagellum-specific secretory system) is required for the transcription of class III genes, which encode the remainder of the basal body and the

external hook structure. Similarly, the assembly of class III gene-encoded structures is required for the expression of the class IV **flagellins**, which are incorporated into the flagellar filament. Here, we demonstrate that mutations in flbT, a flagellar gene of unknown function, can restore **flagellin** protein synthesis and the expression of fljK::lacZ (25-kDa **flagellin**) protein fusions in class III flagellar mutants. These results suggest that FlbT functions to negatively regulate **flagellin** expression in the absence of flagellum assembly. **Deletion** analysis shows that sequences within the 5' untranslated region of the fljK transcript are sufficient for FlbT regulation. To determine the mechanism of FlbT-mediated regulation, we assayed the stability of fljK mRNA. The half-life (t(1/2)) of fljK mRNA in wild-type cells was approximately 11 min and was reduced to less than 1.5 min in a flgE (hook) mutant. A flgE flbT double mutant exhibited an mRNA t(1/2) of greater than 30 min. This suggests that the primary effect of FlbT regulation is an increased turnover of **flagellin** mRNA. The increased t(1/2) of fljK mRNA in a flbT mutant has consequences for the temporal expression of fljK, In contrast to the case for wild-type cells,fljK::lacZ protein fusions in the mutant are expressed almost continuously throughout the C. crescentus cell cycle, suggesting that coupling of **flagellin** gene expression to assembly has a critical influence on regulating cell cycle expression.

AN 1999:749376 SCISEARCH
GA The Genuine Article (R) Number: 240PW
TI FlbT couples flagellum assembly to gene expression in Caulobacter crescentus
AU Mangan E K; Malakooti J; Caballero A; Anderson P; Ely B; Gober J W (Reprint)
CS UNIV CALIF LOS ANGELES, DEPT CHEM & BIOCHEM, LOS ANGELES, CA 90095 (Reprint); UNIV CALIF LOS ANGELES, DEPT CHEM & BIOCHEM, LOS ANGELES, CA 90095; UNIV CALIF LOS ANGELES, INST MOL BIOL, LOS ANGELES, CA 90095; UNIV S CAROLINA, DEPT BIOL SCI, COLUMBIA, SC 29208
CYA USA
SO JOURNAL OF BACTERIOLOGY, (OCT 1999) Vol. 181, No. 19, pp. 6160-6170. Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 82
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 96 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 10
AB We analysed all major proteins secreted into culture media from **Salmonella** typhimurium. Proteins in culture supernatants were collected by trichloroacetic acid precipitation, separated in SDS-polyacrylamide gels and analysed by amino acid sequencing. Wild-type strain SJW1103 cells typically gave rise to nine bands in SDS gels: 89, 67, 58, 52, 50, 42, 40, 35 and (sometimes) 28 kDa. A search of the sequences in the available databases revealed that they were either flagellar proteins or virulence factors. Six of them were flagella specific: FlgK or HAP1 (58 kDa), FliC or **flagellin** (52 kDa), FliD or HAP2 (50 kDa), FlgE or hook protein (42 kDa), FlgL or HAP3 (35 kDa) and FlgD or hook-cap protein (28 kDa). The other four bands were specific for virulence factors: SipA (89 kDa), SipB (67 kDa), SipC (42 kDa) and InvJ (40 kDa). The 42 kDa band was a mixture of FlgE and SipC. We also analysed secreted proteins from more than 30 flagellar mutants, and they were categorized into four groups according to their band patterns: wild type, mot type, polyhook type and master gene type. Virulence factors were constantly secreted at a higher level in all flagellar mutants except a DELTAmot (motAB **deletion**) mutant, in which the amounts were greatly reduced. A new morphological pathway of flagellar biogenesis

including protein secretion is presented.
AN 2000:55003 BIOSIS
DN PREV200000055003
TI Flagellar proteins and type III-exported virulence factors are the predominant proteins secreted into the culture media of **Salmonella** typhimurium.
AU Komoriya, Kaoru; Shibano, Naoko; Higano, Tomomi; Azuma, Norihiro; Yamaguchi, Shigeru; Aizawa, Shin-Ichi (1)
CS (1) Department of Biosciences, Teikyo University, 1-1 Toyosatodai, Utsunomiya, 320-8551 Japan
SO Molecular Microbiology, (Nov., 1999) Vol. 34, No. 4, pp. 767-779. ISSN: 0950-382X.
DT Article
LA English
SL English

L4 ANSWER 97 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB sigma(54) is the subunit of bacterial RNA polymerase that transcribes from promoters with enhancer elements bound by enhancer-binding proteins. By computer searches of Helicobacter pylori genomic sequences, chromosomal **gene disruption**, and RNA analyses, we have identified sigma(54)-recognnzed promoters that regulate transcription of flagellar basal body and hook genes, as well as the enhancer-binding protein FlgR (flagellum regulator), a transactivating protein of the NtrC family. We demonstrate that FlgR is required for bacterial motility and transcription of five promoters for seven basal body and hook genes, In addition, FlgR acts as a repressor of transcription of the sigma(28)-regulated flaA **flagellin** gene promoter, while changes in DNA topology repress transcription of the sigma(54)-regulated flaB **flagellin** gene promoter. Our data indicate that regulation of flagellar gene expression in H. pylori shows similarities with that in enterobacteriaceae and Caulobacter.
AN 1999:79231 SCISEARCH
GA The Genuine Article (R) Number: 157BX
TI Motility of Helicobacter pylori is coordinately regulated by the transcriptional activator FlgR, an NtrC homolog
AU Spohn G; Scarlato V (Reprint)
CS CHITON SPA, IRIS RES CTR, DEPT MOL BIOL, VIA FIORENTINA 1, I-53100 SIENA, ITALY (Reprint); CHITON SPA, IRIS RES CTR, DEPT MOL BIOL, I-53100 SIENA, ITALY
CYA ITALY
SO JOURNAL OF BACTERIOLOGY, (JAN 1999) Vol. 181, No. 2, pp. 593-599. Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 98 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 11
AB In wild-type **Salmonella**, the length of the flagellar hook, a structure consisting of subunits of the hook protein FlgE, is fairly tightly controlled at apprxeq55 nm. Because fliK mutants produce abnormally elongated hook structures that lack the filament structure, FliK appears to be involved in both the termination of hook elongation and the initiation of filament formation. FliK, a soluble protein, is believed to function together with a membrane protein, FlhB, of the export apparatus to mediate the switching of export substrate specificity (from hook protein to **flagellin**) upon completion of hook assembly. We have examined the location of FliK during flagellar morphogenesis. FliK was found in the culture supernatants from the wild-type strain and from

flgD (hook capping protein), flgE (hook protein) and flgK (hook-filament junction protein) mutants, but not in that from a flgB (rod protein) mutant. The amount of FliK in the culture supernatant from the flgE mutant was much higher thanin that from the flgK mutant, indicating that FliK is most efficiently exported prior to the completion of hook assembly. Export was impaired by **deletions** within the N-terminal region of FliK, but not by C-terminal truncations. A decrease in the level of exported FliK resulted in elongated hook structures, sometimes with filaments attached. Our results suggest that the export of FliK during hook assembly is important for hook-length control and the switching of export substrate specificity.

AN 1999:509915 BIOSIS
DN PREV199900509915
TI FliK, the protein responsible for flagellar hook length control in **Salmonella**, is exported during hook assembly.
AU Minamino, Tohru; Gonzalez-Pedrajo, Bertha; Yamaguchi, Kenta; Aizawa, Shin-Ichi; Macnab, Robert M. (1)
CS (1) Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT, 06520-8114 USA
SO Molecular Microbiology, (Oct., 1999) Vol. 34, No. 2, pp. 295-304. ISSN: 0950-382X.
DT Article
LA English
SL English

L4 ANSWER 99 OF 177 USPATFULL
AB Disclosed are the dbp gene and dbp-derived nucleic acid segments from Borrelia burgdorferi, the etiological agent of Lyme disease, and DNA segments encoding dbp from related borrelias. Also disclosed are decorin binding protein compositions and methods of use. The DBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological Borrelia infections, and in particular, for use in the prevention of bacterial adhesion to decorin. DNA segments encoding these proteins and anti-(decorin binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of Borrelia colonization in an animal. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of Lyme disease.
AN 1998:162259 USPATFULL
TI Decorin binding protein compositions and methods of use
IN Guo, Betty, Houston, TX, United States
Hook, Magnus, Houston, TX, United States
PA The Texas A & M University System, College Station, TX, United States (U.S. corporation)
PI US 5853987 19981229
AI US 1996-589711 19960122 (8)
RLI Continuation-in-part of Ser. No. US 1995-427023, filed on 24 Apr 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.; Assistant Examiner: Tung, Joyce
LREP Arnold, White & Durkee
CLMN Number of Claims: 68
ECL Exemplary Claim: 1
DRWN 25 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 4684
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 100 OF 177 USPATFULL
AB The present invention provides methods and apparatus for detecting and discriminating multiple analytes within a test sample which are simple,

user-friendly, cost-effective and fast. In particular, it is preferred that the overall time for sample preparation, nucleic acid sequence amplification, and nucleic acid sequence differentiation be about 5 hours or less. The methods of the present invention comprise (i) rapid sample processing means for rapidly preparing sample material of various types for amplification of nucleic acid sequences using unique nucleic acid extraction buffer formulations, (ii) multianalyte non-preferential amplifying process means for simultaneously and non-preferentially amplifying multiple target nucleic acid sequences, if present within the sample, using appropriate primer oligonucleotides optimized to achieve substantially similar amplification efficiencies, and (iii) multianalyte recognition process means for detecting and discriminating amplified nucleic acid sequences which incorporate nucleic acid sequence mismatch detection means for differentiating minor mismatches between multiple amplified nucleic acid sequences, including only single base mismatches, using appropriate probe oligonucleotides modified with neutral base substitution molecules. The processing kit products in accord with the present invention may incorporate all, or only some, of the above-described means.

AN 1998:154097 USPATFULL
TI Methods and apparatus for preparing, amplifying, and discriminating multiple analytes
IN Wu, Linxian, Sandy, UT, United States
Coombs, Jana, Salt Lake City, UT, United States
Malmstrom, Sharon L., Salt Lake City, UT, United States
Glass, Michael J., Centerville, UT, United States
PA Gull Laboratories, Salt Lake City, UT, United States (U.S. corporation)
PI US 5846783 19981208
AI US 1996-692726 19960806 (8)
RLI Division of Ser. No. US 1996-587209, filed on 16 Jan 1996, now patented, Pat. No. US 5612473
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.; Assistant Examiner: Tung, Joyce
LREP Workman, Nydegger & Seeley
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1832
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 101 OF 177 USPATFULL
AB A fusion protein which comprises the B subunit of the labile toxin (LT-B) of E. coli and part of the **flagellin** (flaA) protein of C. jejuni is antigenic and is useful for decreasing colonization in chickens by Campylobacter species. The protein is produced by E. coli cells, transformed by the plasmid pBEB into which DNA sequences encoding the novel protein have been introduced.

AN 1998:144221 USPATFULL
TI Campylobacter jejuni **flagellin**/Escherichia coli LT-B fusion protein
IN Meinersmann, Richard J., Lithonia, GA, United States
Khoury, Christian A., Philadelphia, PA, United States
PA The United States of America as represented by the Secretary of Agriculture, Washington, DC, United States (U.S. government)
PI US 5837825 19981117
AI US 1997-829026 19970331 (8)
RLI Continuation of Ser. No. US 1993-150305, filed on 12 Nov 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Caputa, Anthony C.
LREP Silverstein, M. Howard, Fado, John, Graeter, Janelle S.
CLMN Number of Claims: 1

ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 102 OF 177 USPATFULL
AB Purified and isolated nucleic acid molecules are provided which encode a basal body rod protein of a strain of Campylobacter, particularly C. jejuni, or a fragment or an analog of the basal body rod protein. The nucleic acid molecules may be used to produce proteins free of contaminants derived from bacteria normally containing the FlgF or FlgG proteins for purposes of diagnostics and medical treatment. Furthermore, the nucleic acid molecules, proteins encoded thereby and antibodies raised against the proteins, may be used in the diagnosis of infection.
AN 1998:131534 USPATFULL
TI Basal body rod protein genes of campylobacter
IN Chan, Voon Loong, Toronto, Canada
Louie, Helena, Markham, Canada
PA University of Toronto, Toronto, United States (non-U.S. corporation)
PI US 5827654 19981027
AI US 1995-436748 19950508 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Portner, Ginny Allen
LREP Sim & McBurney
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1257
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 103 OF 177 USPATFULL
AB The invention provides methods and compositions for inducing and maintaining tolerance to epitopes or antigens containing the epitopes. The compositions include expression cassettes and vectors including DNA sequences coding for a fusion immunoglobulin operably linked to transcriptional and translational control regions functional in a hemopoietic or lymphoid cell. The fusion immunoglobulin includes at least one heterologous tolerogenic epitope at the N-terminus variable region of the immunoglobulin. Cells stably transformed with the expression vector are formed and used to produce fusion immunoglobulin. The invention also provides methods for screening for novel tolerogenic epitopes and for inducing and maintaining tolerance. The methods of the invention are useful in the diagnosis and treatment of autoimmune or allergic immune responses.
AN 1998:122069 USPATFULL
TI Tolerogenic fusion proteins of immunoglobulins and methods for inducing and maintaining tolerance
IN Scott, David W., Pittsford, NY, United States
Zambidis, Elias T., Rochester, NY, United States
PA University of Rochester, Rochester, NY, United States (U.S. corporation)
PI US 5817308 19981006
AI US 1994-195874 19940211 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Low, Christopher S. F.
LREP Morrison & Foerster
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1520
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 104 OF 177 USPATFULL
AB Methods and compositions for the prevention, treatment and diagnosis of Lyme disease. Novel B. burgdorferi polypeptides, serotypic variants thereof, fragments thereof and derivatives thereof. Fusion proteins and multimeric proteins comprising same. Multicomponent vaccines comprising novel B. burgdorferi polypeptides in addition to other immunogenic B. burgdorferi polypeptides. DNA sequences, recombinant DNA molecules and transformed host cells useful in the compositions and methods. Antibodies directed against the novel B. burgdorferi polypeptides, and diagnostic kits comprising the polypeptides or antibodies.
AN 1998:111773 USPATFULL
TI OspE, OspF, and S1 polypeptides in Borrelia burgdorferi
IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Lam, Tuan T., San Jose, CA, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5807685 19980915
AI US 1997-909119 19970811 (8)
RLI Division of Ser. No. US 1993-118469, filed on 8 Sep 1993, now patented, Pat. No. US 5656451 And a continuation-in-part of Ser. No. US 1993-99757, filed on 30 Jul 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Carlson, Karen
LREP Fish & Neave, Haley, Jr., James F., Gunnison, Jane T.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2343
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 105 OF 177 USPATFULL
AB The present invention provides methods and apparatus for detecting and discriminating multiple analytes within a test sample which are simple, user-friendly, cost-effective and fast. In particular, it is preferred that the overall time for sample preparation, nucleic acid sequence amplification, and nucleic acid sequence differentiation be about 5 hours or less. The methods of the present invention comprise (i) rapid sample processing means for rapidly preparing sample material of various types for amplification of nucleic acid sequences using unique nucleic acid extraction buffer formulations, (ii) multianalyte non-preferential amplifying process means for simultaneously and non-preferentially amplifying multiple target nucleic acid sequences, if present within the sample, using appropriate primer oligonucleotides optimized to achieve substantially similar amplification efficiencies, and (iii) multianalyte recognition process means for detecting and discriminating amplified nucleic acid sequences which incorporate nucleic acid sequence mismatch detection means for differentiating minor mismatches between multiple amplified nucleic acid sequences, including only single base mismatches, using appropriate probe oligonucleotides modified with neutral base substitution molecules. The processing kit products in accord with the present invention may incorporate all, or only some, of the above-described means.
AN 1998:58121 USPATFULL
TI Specific oligonucleotide primer pairs and probes for discriminating specific analytes
IN Wu, Linxian, Sandy, UT, United States
Coombs, Jana, Salt Lake City, UT, United States
Malmstrom, Sharon L., Salt Lake City, UT, United States
Glass, Michael J., Centerville, UT, United States
PA Gull Laboratories, Inc., Salt Lake City, UT, United States (U.S. corporation)

PI US 5756701 19980526
AI US 1996-692725 19960806 (8)
RLI Division of Ser. No. US 1996-587209, filed on 16 Jan 1996, now patented, Pat. No. US 5612473
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP Workman, Nydegger & Seeley
CLMN Number of Claims: 14
ECL Exemplary Claim: 5
DRWN No Drawings
LN.CNT 1660
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 106 OF 177 USPATFULL
AB The present invention provides methods and apparatus for detecting and discriminating multiple analytes within a test sample which are simple, user-friendly, cost-effective and fast. In particular, it is preferred that the overall time for sample preparation, nucleic acid sequence amplification, and nucleic acid sequence differentiation be about 5 hours or less. The methods of the present invention comprise (i) rapid sample processing means for rapidly preparing sample material of various types for amplification of nucleic acid sequences using unique nucleic acid extraction buffer formulations, (ii) multianalyte non-preferential amplifying process means for simultaneously and non-preferentially amplifying multiple target nucleic acid sequences, if present within the sample, using appropriate primer oligonucleotides optimized to achieve substantially similar amplification efficiencies, and (iii) multianalyte recognition process means for detecting and discriminating amplified nucleic acid sequences which incorporate nucleic acid sequence mismatch detection means for differentiating minor mismatches between multiple amplified nucleic acid sequences, including only single base mismatches, using appropriate probe oligonucleotides modified with neutral base substitution molecules. The processing kit products in accord with the present invention may incorporate all, or only some, of the above-described means.
AN 1998:54694 USPATFULL
TI Methods and kits using inosine-containing probes for discriminating variant nucleic acid sequences
IN Wu, Linxian, Sandy, UT, United States
Coombs, Jana, Salt Lake City, UT, United States
Malmstrom, Sharon L., Salt Lake City, UT, United States
Glass, Michael J., Centerville, UT, United States
PA Gull Laboratories, Inc., Salt Lake City, UT, United States (U.S. corporation)
PI US 5753444 19980519
AI US 1996-689235 19960807 (8)
RLI Division of Ser. No. US 1996-587209, filed on 16 Jan 1996, now patented, Pat. No. US 5612473
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP Workman, Nydegger & Seeley
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1642
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 107 OF 177 USPATFULL
AB Methods and compositions for the prevention and diagnosis of Lyme disease. OspA and OspB polypeptides and serotypic variants thereof, which elicit in a treated animal the formation of an immune response which is effective to treat or protect against Lyme disease as caused by

infection with B. burgdorferi. Anti-OspA and anti-OspB antibodies that are effective to treat or protect against Lyme disease as caused by infection with B. burgdorferi. A screening method for the selection of those OspA and OspB polypeptides and anti-OspA and anti-OspB antibodies that are useful for the prevention and detection of Lyme disease. Diagnostic kits including OspA and OspB polypeptides or antibodies directed against such polypeptides.

AN 1998:48213 USPATFULL
TI Compositions and methods for the prevention and diagnosis of lyme disease
IN Flavell, Richard A., Killingworth, CT, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
Fikrig, Erol, Guilford, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5747294 19980505
AI US 1994-320161 19941007 (8)
RLI Continuation of Ser. No. US 1991-682355, filed on 8 Apr 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-602551, filed on 26 Oct 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-538969, filed on 15 Jun 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Loring, Susan A.
LREP Fish & Neave, Haley, Jr., Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 9
ECL Exemplary Claim: 3
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 2461
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 108 OF 177 USPATFULL
AB The present invention provides methods and apparatus for detecting and discriminating multiple analytes within a test sample which are simple, user-friendly, cost-effective and fast. In particular, it is preferred that the overall time for sample preparation, nucleic acid sequence amplification, and nucleic acid sequence differentiation be about 5 hours or less. The methods of the present invention comprise (i) rapid sample processing means for rapidly preparing sample material of various types for amplification of nucleic acid sequences using unique nucleic acid extraction buffer formulations, (ii) multianalyte non-preferential amplifying process means for simultaneously and non-preferentially amplifying multiple target nucleic acid sequences, if present within the sample, using appropriate primer oligonucleotides optimized to achieve substantially similar amplification efficiencies, and (iii) multianalyte recognition process means for detecting and discriminating amplified nucleic acid sequences which incorporate nucleic acid sequence mismatch detection means for differentiating minor mismatches between multiple amplified nucleic acid sequences, including only single base mismatches, using appropriate probe oligonucleotides modified with neutral base substitution molecules. The processing kit products in accord with the present invention may incorporate all, or only some, of the above-described means.

AN 1998:39387 USPATFULL
TI Inosine-containing probes for detecting E.coli 0157:H7
IN Wu, Linxian, Sandy, UT, United States
Coombs, Jana, Salt Lake City, UT, United States
Malmstrom, Sharon L., Salt Lake City, UT, United States
Glass, Michael J., Centerville, UT, United States
PA Gull Laboratories, Inc., Salt Lake City, UT, United States (U.S. corporation)
PI US 5738995 19980414
AI US 1996-689236 19960807 (8)
RLI Division of Ser. No. US 1996-587209, filed on 16 Jan 1996, now patented,

Pat. No. US 5612473
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP Workman, Nydegger & Seeley
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1640
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 109 OF 177 USPATFULL
AB The invention relates to conjugates of poorly immunogenic antigens, e.g. peptides, proteins and polysaccharides, with a synthetic peptide carrier constituting a T cell epitope derived from the sequence of human heat shock protein hsp65, or an analog thereof, said peptide or analog being capable of increasing substantially the immunogenicity of the poorly immunogenic antigen. Suitable peptides according to the invention are Pep278h, which corresponds to positions 458-474 of human hsp65, and Pep II, which corresponds to positions 437-448 of human hsp65, but in which two cysteine residues at positions 442 and 447 are replaced serine residues.
AN 1998:36365 USPATFULL
TI Conjugates of poorly immunogenic antigens and synthetic peptide carriers and vaccines comprising them
IN Cohen, Irun R., Rehovot, Israel
Fridkin, Matityahu, Rehovot, Israel
Konen-Waisman, Stephanie, Tel Aviv, Israel
PA Yeda Research and Development Co. Ltd., Israel (non-U.S. corporation)
PI US 5736146 19980407
WO 9403208 19940217
AI US 1995-379613 19950222 (8)
WO 1993-US7096 19930728
19950222 PCT 371 date
19950222 PCT 102(e) date
PRAI IL 1992-102687 19920730
DT Utility
FS Granted
EXNAM Primary Examiner: Woodward, Michael P.
LREP Pennie & Edmonds
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 49 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 1401
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 110 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.DUPLICATE 12
AB The flagellar-specific anti-sigma factor, FlgM, inhibits the expression of late flagellar genes until the hook-basal body structure is assembled and competent for export of the **flagellins** and hook-associated proteins (flagellar late proteins). FlgM monitors this assembly checkpoint by being a substrate for export via the hook-basal body structure, which includes a type III protein secretion complex. Amino acid sequence alignment of late-secreted flagellar proteins identified a region of homology present in the aminoterminus of FlgM and the other late flagellar proteins, but not in flagellar proteins secreted earlier during flagellar biosynthesis. Single amino acid substitutions at specific positions within this motif decreased the export of FlgM. **Deletion** of this region (S3-P11) resulted in lower intracellular FlgM levels, but did not prevent recognition and export by the flagellar-specific secretion system. Mutations were isolated in a second region of FlgM spanning residues K27 to A65 that exhibited increased anti-.sigma.28 activity. These FlgM 'hyperinhibitor' mutants were secreted less than wild-type FlgM. Mutations that interfere with the secretion of FlgM without abolishing

anti-.sigma.28 activity have a negative effect upon the secretion of a His-tagged FlgM mutant that lacks anti-.sigma.28 activity. Models are proposed to explain the dominant negative phenotype of the FlgM secretion mutants reported in this study.
AN 1998410267 EMBASE
TI The type III secretion determinants of the flagellar anti-transcription factor, FlgM, extend from the amino-terminus into the anti-.sigma.28 domain.
AU Chilcott G.S.; Hughes K.T.
CS K.T. Hughes, Department of Microbiology, 357242, University of Washington, Seattle, WA 98195, United States. hughes@u.washington.edu
SO Molecular Microbiology, (1998) 30/5 (1029-1040).
Refs: 57
ISSN: 0950-382X CODEN: MOMIEE
CY United Kingdom
DT Journal; Article
FS 004 Microbiology
029 Clinical Biochemistry
LA English
SL English

L4 ANSWER 111 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 13
AB A mutant strain of **Salmonella** typhimurium, SJW46, has flagellar filaments supercoiled in the same form as the wild-type strain, SJW1103, and swims normally. However, its flagellar filaments are mechanically unstable and show anomalous behaviors of polymorphism. Flagelhn from SJW46 has a large central **deletion** from Ala204 to Lys292 of SJW1103 **flagellin**, which has been thought to be located in the outer surface of the filament. Since the filament structure is determined by intersubunit interactions of the terminal regions in the densely packed core of the filament, no serious involvement of the **deleted** portion was expected in the filament stability and polymorphism. In order to locate the **deleted** portion and to understand the underlying mechanism of these anomalous characteristics, we carried out structure analysis of the L-type straight filament reconstituted from a mutant **flagellin** of SJW46 (SJW46S) and compared the structure with that of the SJW1660 filament, which is also the L-type but composed of **flagellin** with no **deletion**. The **deleted** portion was identified as the outermost subdomain, and the structure in the core region showed no appreciable differences. The structure revealed the previously identified folding of **flagellin** in further detail, and the significance of intersubunit interactions between outer domains, which are present in the SJW1660 filament but absent in the SJW46 filament. This suggests that these contacts have a significant contribution to the filament stability and polymorphic behavior, despite the fact that the contacting surface area occupies only a minor portion of the whole intersubunit interactions.
AN 1999:773 BIOSIS
DN PREV199900000773
TI Role of the outermost subdomain of **Salmonella flagellin** in the filament structure revealed by electron cryomicroscopy.
AU Mimori-Kiyosue, Yuko; Yamashita, Ichiro; Fujiyoshi, Yoshinori; Yamaguchi, Shigeru; Namba, Keiichi (1)
CS (1) Int. Inst. Advanced Res., Matsushita, Electric Ind. Co. Ltd., 3-4 Hikaridai, Seika 619-0237 Japan
SO Journal of Molecular Biology, (Nov. 27, 1998) Vol. 284, No. 2, pp. 521-530.
ISSN: 0022-2836.
DT Article
LA English

L4 ANSWER 112 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB A nonapeptide from IL-1.beta. has been reported to be an immunostimulant

and adjuvant. To investigate the possibility of enhancing the immunogenicity of recombinant antigens delivered by live-attenuated **Salmonella** strains, we inserted an oligonucleotide coding for the non-apeptide from murine IL-1.beta. into the genes of three model proteins: LamB, MalE, and **flagellin**. The hybrid proteins were expressed and delivered in vivo by **Salmonella** aroA strains, and serum antibody responses were analyzed. The results showed that the nonapeptide induced an increase in the immune response against **Salmonella**- delivered **flagellin**, measured on day 28 post-immunization. However, the adjuvant effect was lost by day 42. In no case was an adjuvant effect detected for **Salmonella**-delivered Lamb or MalE. Thus, by comparing the immune responses raised by purified Male with and without the peptide, we investigated whether the insertion of the peptide affected the immunogenicity of the protein itself. Also in this case, a modest adjuvant effect was shown only after primary immunization and when very low doses of antigen were used. In conclusion, the immunomodulatory properties of the IL-1.beta. peptide can also be detected when it is delivered in vivo by **Salmonella**; however, the effect is modest and antigen-dependent.

AN 1998077817 EMBASE
TI Effects of the insertion of a nonapeptide from murine IL-1.beta. on the immunogenicity of carrier proteins delivered by live attenuated **Salmonella**.
AU Chen I.; Pizza M.; Rappuoli R.; Newton S.M.C.
CS R. Rappuoli, IRIS, Chiron Vacc. Immunobiol. Rés. Inst., Via Fiorentina 1, I-53100 Siena, Italy. rappuoli@iris02.biocine.it
SO Archives of Microbiology, (1998) 169/2 (113-119).
Refs: 32
ISSN: 0302-8933 CODEN: AMICCW
CY Germany
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L4 ANSWER 113 OF 177 USPATFULL
AB A nucleic acid molecule having a sequence encoding benzoyl-glycine aminohydrolase, commonly known as hippuricase, of Campylobacter jejuni is provided. Methods are disclosed for detecting C. jejuni in a biological sample by determining the presence of hippuricase or a nucleic acid molecule encoding hippuricase in the sample.
AN 97:115125 USPATFULL
TI Hippuricase gene
IN Chan, Voon Loong, 93 Elmridge Dr., Toronto, Ontario, Canada M6B 1A6
Hani, Eric Kurt, 37 Greengrove Crescent, Toronto, Ontario, Canada M3A 1H8
PI US 5695960 19971209
AI US 1995-485216 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1993-61696, filed on 14 May 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Hendricks, Keith D.; Assistant Examiner: Saidha, Tekchand
LREP Bereskin & Parr
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1609
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 114 OF 177 USPATFULL
AB Methods and compositions for the prevention, treatment and diagnosis of Lyme disease. Novel B. burgdorferi polypeptides, serotypic variants

thereof, fragments thereof and derivatives thereof. Fusion proteins and multimeric proteins comprising same. Multicomponent vaccines comprising novel B. burgdorferi polypeptides in addition to other immunogenic B. burgdorferi polypeptides. DNA sequences, recombinant DNA molecules and transformed host cells useful in the compositions and methods. Antibodies directed against the novel B. burgdorferi polypeptides, and diagnostic kits comprising the polypeptides or antibodies.

AN 97:70893 USPATFULL
TI OspE, OspF, and S1 polypeptides in borrelia burgdorferi
IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Lam, Tuan T., San Jose, CA, United States
Kantor, Fred S., Orange, CT, United States
Barthold, Stephen W., Madison, CT, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5656451 19970812
AI US 1993-118469 19930908 (8)
RLI Continuation-in-part of Ser. No. US 1993-99757, filed on 30 Jul 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Carlson, K. Cochrane
LREP Fish & Neave, Haley, Jr. Esq., James F., Gunnison, Esq., Jane T.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2447
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 115 OF 177 USPATFULL
AB Provided is a fusion molecule comprising a DNA sequence encoding a thioredoxin-like protein fused to a DNA sequence encoding a second peptide or protein. The peptide or protein may be fused to the amino terminus of the thioredoxin-like molecule, the carboxyl terminus of the thioredoxin-like molecule, or within the thioredoxin-like molecule, for example at the active-site loop of said molecule. The fusion molecule may be modified to introduce one or more metal-binding/chelating amino-acid residues to aid in purification. Expression of this fusion molecule under the control of a regulatory sequence capable of directing its expression in a desired host cell, produces high levels of stable and soluble fusion protein. The fusion protein, located in the bacterial cytoplasm, may be selectively released from the cell by osmotic shock or freeze/thaw procedures. It may be optionally cleaved to liberate the soluble, correctly folded heterologous protein from the thioredoxin-like portion.

AN 97:59078 USPATFULL
TI Peptide and protein fusions to thioredoxin, thioredoxin-like molecules, and modified thioredoxin-like molecules
IN McCoy, John, Reading, MA, United States
DiBlasio-Smith, Elizabeth, Tyngsboro, MA, United States
Grant, Kathleen, Salem, MA, United States
LaVallie, Edward R., Tewksbury, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 5646016 19970708
AI US 1993-165301 19931210 (8)
RLI Continuation-in-part of Ser. No. US 1992-921848, filed on 28 Jul 1992, now patented, Pat. No. US 5292646, issued on 8 Mar 1994 which is a continuation-in-part of Ser. No. US 1991-745382, filed on 14 Aug 1991, now patented, Pat. No. US 5270181, issued on 14 Dec 1993 which is a continuation-in-part of Ser. No. US 1991-652531, filed on 6 Feb 1991, now abandoned
DT Utility

FS Granted
EXNAM Primary Examiner: Hendricks, Keith D.; Assistant Examiner: Bugaisky, G. E.
LREP Meinert, M. C.
CLMN Number of Claims: 41
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 2397
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 116 OF 177 USPATFULL
AB An isolated nucleic acid molecule comprising the agfA gene of **Salmonella**. Methods and compositions suitable for diagnostic tests utilizing the isolated gene, and protein therefrom, to give highly specific diagnostic assays to **Salmonella**, and/or enteropathogenic bacteria of the family Enterobacteriaceae.
AN 97:47521 USPATFULL
TI Methods and compositions comprising the agfA gene for detection of **Salmonella**
IN Doran, James L., Brentwood Bay, Canada
Kay, William W., Victoria, Canada
Collinson, S. Karen, Brentwood Bay, Canada
Clouthier, Sharon C., Naniamo, Canada
PA University of Victoria Innovation & Development Corp., Victoria, Canada (non-U.S. corporation)
PI US 5635617 19970603
AI US 1994-233788 19940426 (8)
RLI Continuation-in-part of Ser. No. US 1993-54452, filed on 26 Apr 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Campbell, Eggerton A.
LREP Seed and Berry LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 26 Drawing Figure(s); 22 Drawing Page(s)
LN.CNT 3934
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 117 OF 177 USPATFULL
AB Provided by the present invention are novel methods of detecting ligand interactions, as well as regents useful in the method, including DNA and host cells; and more specifically relates to novel methods for the detection of protein/protein interactions and their application in epitope mapping and the study of ligand/receptor interactions. Also provided are vaccines and kits comprising the expression products and host cells of the invention.
AN 97:47098 USPATFULL
TI Method of detecting ligand interactions
IN McCoy, John M., Reading, MA, United States
Lu, Zhijian, Arlington, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 5635182 19970603
AI US 1994-260582 19940616 (8)
DCD 20101214
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Bugalsky, Gabriele E.
LREP Meinert, M. C.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)

LN.CNT 1935
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 118 OF 177 USPATFULL
AB Diagnostic means and methods for Lyme disease comprising B. burgdorferi **flagellin** polypeptides and antibodies. Compositions and methods comprising neuroborreliosis-associated antigens useful for the detection, treatment and prevention of neuroborreliosis, arthritis, carditis and other manifestations of Lyme disease.
AN 97:29199 USPATFULL
TI **Flagellin**-based polypeptides for the diagnosis of lyme disease
IN Flavell, Richard A., Killingworth, CT, United States
Fikrig, Erol, Guilford, CT, United States
Berland, Robert, Kingston, NY, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 5618533 19970408
AI US 1993-166160 19931210 (8)
RLI Continuation of Ser. No. US 1992-837193, filed on 11 Feb 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Minnifield, N. M.
LREP Fish & Neave, Haley, Jr., Esq., James F., Kanter, Esq., Madge r.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1178

L4 ANSWER 119 OF 177 USPATFULL
AB The present invention provides methods and apparatus for detecting and discriminating multiple analytes within a test sample which are simple, user-friendly, cost-effective and fast. In particular, it is preferred that the overall time for sample preparation, nucleic acid sequence amplification, and nucleic acid sequence differentiation be about 5 hours or less. The methods of the present invention comprise (i) rapid sample processing means for rapidly preparing sample material of various types for amplification of nucleic acid sequences using unique nucleic acid extraction buffer formulations, (ii) multianalyte non-preferential amplifying process means for simultaneously and non-preferentially amplifying multiple target nucleic acid sequences, if present within the sample, using appropriate primer oligonucleotides optimized to achieve substantially similar amplification efficiencies, and (iii) multianalyte recognition process means for detecting and discriminating amplified nucleic acid sequences which incorporate nucleic acid sequence mismatch detection means for differentiating minor mismatches between multiple amplified nucleic acid sequences, including only single base mismatches, using appropriate probe oligonucleotides modified with neutral base substitution molecules. The processing kit products in accord with the present invention may incorporate all, or only some, of the above-described means.
AN 97:22913 USPATFULL
TI Methods, kits and solutions for preparing sample material for nucleic acid amplification
IN Wu, Linxian, Sandy, UT, United States
Coombs, Jana, Salt Lake City, UT, United States
Malmstrom, Sharon L., Salt Lake City, UT, United States
Glass, Michael J., Centerville, UT, United States
PA Gull Laboratories, Salt Lake City, UT, United States (U.S. corporation)
PI US 5612473 19970318
AI US 1996-587209 19960116 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Horlick, Kenneth R.

LREP Workman, Nydegger & Seeley
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1719
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 120 OF 177 USPATFULL
AB Compositions and methods for detecting the conversion to mucoidy in Pseudomonas aeruginosa are disclosed. Chronic respiratory infections with mucoid Pseudomonas aeruginosa are the leading cause of high mortality and morbidity in cystic fibrosis. The initially colonizing strains are nonmucoid but in the cystic fibrosis lung they invariably convert into the mucoid form causing further disease deterioration and poor prognosis. The molecular basis of this conversion to mucoidy is also disclosed. The algU gene encodes a protein homologous to an alternative sigma factor regulating sporulation and other developmental processes in Bacillus, and along with the negative regulators mucA and mucB comprises the gene cluster controlling conversion to mucoidy. The switch from nonmucoid to mucoid state is caused by frameshift **deletions** and duplications in the second gene of the cluster, mucA. Inactivation of mucA results in constitutive expression of genes, such as algD, dependent on algU for transcription. Insertional inactivation of mucB on the chromosome of the standard genetic strain PAO also resulted in mucoid phenotype, and in a strong transcriptional activation of algD. Activation of algD results in increased synthesis of the exopolysaccharide alginate rendering P. aeruginosaa mucoid.
AN 97:1557 USPATFULL
TI Detection of conversion to mucoidy in pseudomonas aeruginosa infecting cystic fibrosis patients
IN Deretic, Vojo, San Antonio, TX, United States
Martin, Daniel W., San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5591838 19970107
AI US 1993-17114 19930212 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Parr, Margaret; Assistant Examiner: Houttem, Scott
LREP Arnold, White & Durkee
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 25 Drawing Page(s)
LN.CNT 2225
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 121 OF 177 USPATFULL
AB Chimeric DNA fragments are provided which include a nucleotide sequence substantially the same as that which codes for the HA surface protein of an influenza A virus having five immunodominant antigenic sites, wherein a nucleotide sequence substantially the same as that which codes for a foreign epitope is inserted into the nucleotide sequence of an antigenic site. Corresponding chimeric peptides, expression vectors, and transformed hosts are provided as well. These peptides are useful in providing vaccines against the respective antigens and in test kits to detect the exposure to such antigens. Additionally, these peptides or their corresponding antibodies are useful in methods of treatment and prevention of the manifestations of exposure to these antigens, including immunotherapy.
AN 97:1542 USPATFULL
TI Expression of specific immunogens using viral antigens
IN Hung, Paul P., Bryn Mawr, PA, United States
Lee, Shaw-Guang L., Villanova, PA, United States
Kalyan, Narender K., Wayne, PA, United States

PA American Home Products Corporation, Madison, NJ, United States (U.S. corporation)
PI US 5591823 19970107
AI US 1993-169813 19931217 (8)
RLI Continuation-in-part of Ser. No. US 1991-805105, filed on 11 Dec 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Smith, Lynette F.
LREP Jackson, Richard K.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 122 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB To investigate the involvement of RpoN in flagellum production and pathogenicity of Vibrio (Listonella) anguillarum, the rpoN gene was cloned and sequenced. The deduced product of the rpoN gene displayed strong homology to the alternative sigma(54) factor (RpoN) of numerous species of bacteria. In addition, partial sequencing of rpoN-linked ORFs revealed a marked resemblance to similarly located ORFs in other bacterial species. A polar insertion or an in-frame **deletion** in the coding region of rpoN abolished expression of the **flagellin** subunits and resulted in loss of motility. Introduction of the rpoN gene of V. anguillarum or Pseudomonas putida into the rpoN mutants restored flagellation and motility. The rpoN mutants were proficient in the expression of other proposed virulence determinants of V. anguillarum, such as ability to grow under low available iron conditions, and expression of the LPS O-antigen and of haemolytic and proteolytic extracellular products. The infectivity of the rpoN mutants with respect to the wild-type strain was unaffected following intraperitoneal injection of fish but was reduced significantly when fish were immersed in bacteria-containing water. Thus, RpoN does not appear to regulate any factors required for virulence subsequent to penetration of the fish epithelium, but is important in the infection of fish by water-borne V. anguillarum.
AN 1998:24541 SCISEARCH
GA The Genuine Article (R) Number: YM496
TI RpoN of the fish pathogen Vibrio (Listonella) anguillarum is essential for flagellum production and virulence by the water-borne but not intraperitoneal route of inoculation
AU OToole R (Reprint); Milton D L; Horstedt P; WolfWatz H
CS UMEA UNIV, DEPT CELL & MOL BIOL, S-90187 UMEA, SWEDEN (Reprint); UMEA UNIV, DEPT PATHOL, S-90187 UMEA, SWEDEN
CYA SWEDEN
SO MICROBIOLOGY-UK, (DEC 1997) Vol. 143, Part 12, pp. 3849-3859. Publisher: SOC GENERAL MICROBIOLOGY, MARLBOROUGH HOUSE, BASINGSTOKE RD, SPENCERS WOODS, READING, BERKS, ENGLAND RG7 1AE. ISSN: 1350-0872.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 50
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 123 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Flagellar motility has been shown to be an essential requirement for the ability of Helicobacter pylori to colonize the gastric mucosa, While some flagellar structural components have been studied in molecular detail, nothing was known about factors that play a role in the regulation of flagellar biogenesis. We have cloned and characterized an H. pylori homolog (named flbA) of the lcrD/flbF family of genes. Many proteins encoded by these genes are known to be involved in flagellar biogenesis or

secretion of virulence associated proteins via type III secretion systems, The H. pylori flbA gene (2,196 bp) is capable of coding for a predicted 732-amino-acid, 80.9-kDa protein that has marked sequence similarity with other known members of the LcrD/FlbF protein family, An isogenic strain with a mutation in the flbA gene was constructed by disruption of the gene with a kanamycin resistance cassette and electroporation-mediated allelic exchange mutagenesis. The mutant strain expressed neither the FlaA nor the FlaB **flagellin** protein, The expression of the FlgE hook protein was reduced in comparison with the wild-type strain, and the extent of this reduction was growth phase dependent, The flbA **gene disruption** was shown to downregulate the expression of these flagellar genes on the transcriptional level, The flbA mutants were aflagellate and completely nonmotile, Occasionally, assembled hook structures could be observed, indicating that export of axial flagellar filament components was still possible in the absence of the flbA gene product, The hydrophilic part of the FlbA protein was expressed in Escherichia coli, purified, and used to raise a polyclonal rabbit antiserum against the FlbA protein. Western blot experiments with this antiserum indicated that the FlbA protein is predominantly associated with the cytoplasmic membrane in H. pylori. The antiserum cross-reacted with two other proteins (97 and 43 kDa) whose expression,vas not affected by the flbA **gene disruption** and which might represent further H. pylori homologs of the LcrD/FlbF protein family.

AN 97:141756 SCISEARCH
GA The Genuine Article (R) Number: WG582
TI Cloning and characterization of the Helicobacter pylori flbA gene, which codes for a membrane protein involved in coordinated expression of flagellar genes
AU Schmitz A; Josenhans C; Suerbaum S (Reprint)
CS RUHR UNIV BOCHUM, D-44780 BOCHUM, GERMANY (Reprint); RUHR UNIV BOCHUM, D-44780 BOCHUM, GERMANY
CYA GERMANY
SO JOURNAL OF BACTERIOLOGY, (FEB 1997) Vol. 179, No. 4, pp. 987-997.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA English
REC Reference Count: 55
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 124 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 14

AB **Deletion** formation between the 5'-mostly homologous sequences and between the 3'-homeologous sequences of the two **Salmonella** typhimurium **flagellin** genes was examined using plasmid-based **deletion**-detection systems in various Escherichia coli genetic backgrounds. **Deletions** in plasmid pLC103 occur between the 5' sequences, but not between the 3' sequences, in both RecA-independent and RecA dependent ways. Because the former is predominant, **deletion** formation in a recA background depends on the length of homologous sequences between the two genes. **Deletion** rates were enhanced 30- to 50-fold by the mismatch repair defects, mutS, mutL and uvrD, and 250-fold by the ssb-3 allele, but the effect of the mismatch defects was canceled by the DELTA-recA allele. Rates of the **deletion** between the 3' sequences in plasmid pLC107 were enhanced 17- to 130-fold by ssb alleles, but not by other alleles. For **deletions** in pLC107, 96% of the endpoints in the recA+ background and 88% in DELTA-recA were in the two hot spots of the 60- and 33-nucleotide (nt) homologous sequences, whereas in the ssb-3 background gt 50% of the endpoints were in four- to 14-nt direct repeats dispersed in the entire 3' sequences. The **deletion** formation between the homeologous sequences is RecA-independent but depends on the length of consecutive homologies. The

mutant ssb allele lowers this dependency and results in the increase in **deletion** rates. Roles of mutant SSB are discussed with relation to misalignment in replication slippage.

AN 1997:155958 BIOSIS
DN PREV199799455161
TI **Deletion** formation between the two **Salmonella** typhimurium **flagellin** genes encoded on the mini F plasmid: Escherichia coli ssb alleles enhance **deletion** rates and change hot-spot preference for **deletion** endpoints.
AU Mukaihara, Takafumi; Enomoto, Masatoshi (1)
CS (1) Dep. Biol., Fac. Sci., Okayama Univ., Okayama 700 Japan
SO Genetics, (1997) Vol. 145, No. 3, pp. 563-572.
ISSN: 0016-6731.
DT Article
LA English

L4 ANSWER 125 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 15
AB Oligonucleotides coding for linear epitopes of the fimbrial colonization factor antigen I (CFA/I) of enterotoxigenic Escherichia coli (ETEC) were cloned and expressed in a **deleted** form of the **Salmonella** muenchen **flagellin** fliC (H1-d) gene. Four synthetic oligonucleotide pairs coding for regions corresponding to amino acids 1 to 15 (region I), amino acids 11 to 25 (region II), amino acids 32 to 45 (region III) and amino acids 88 to 102 (region IV) were synthesized and cloned in the **Salmonella flagellin**-coding gene. All four hybrid **flagellins** were exported to the bacterial surface where they produced flagella, but only three constructs were fully motile. Sera recovered from mice immunized with intraperitoneal injections of purified flagella containing region II (Flail) or region IV (FIaIV) showed high titres against dissociated solid-phase-bound CFA/I subunits. Hybrid **flagellins** containing region I (FlaI) or region III (FIaIII)) elicited a weak immune response as measured in enzyme-linked immunosorbent assay (ELISA) with dissociated CFA/I subunits. None of the sera prepared with purified hybrid flagella were able to agglutinate or inhibit haemagglutination promoted by CFA/I-positive strains. Moreover, inhibition ELISA tests indicated that antisera directed against region I, II, III or IV cloned in **flagellin** were not able to recognize surface-exposed regions on the intact CFA/I fimbriae.
AN 1997:251318 BIOSIS
DN PREV199799550521
TI Cloning and expression of colonization factor antigen I (CFA/I) epitopes of enterotoxigenic Escherichia coli (ETEC) in **Salmonella flagellin**.
AU Luna, M. G.; Martins, M. M.; Newton, S. M. C.; Costa, S. O. P.; Almeida, D. F.; Ferreira, L. C. S. (1)
CS (1) Lab. de Fisiol. Celular, Inst. de Biofisica Carlos Chagas Filho, UFRJ-CCS, Cidade Univ., Rio de Janeiro, RJ 21941-590 Brazil
SO Research in Microbiology, (1997) Vol. 148, No. 3, pp. 217-228.
ISSN: 0923-2508.
DT Article
LA English

L4 ANSWER 126 OF 177 USPATFULL
AB This invention relates to flagella-less strains of Borrelia to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia

persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.
AN 96:116113 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio G., Newbury Park, CA, United States
Sadziene, Adriadna, San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5585102 19961217
AI US 1993-124290 19930920 (8)
RLI Continuation of Ser. No. US 1991-641143, filed on 11 Jan 1991
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Arnold, White & Durkee
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1434

L4 ANSWER 127 OF 177 USPATFULL
AB Compositions and methods for detecting the conversion to mucoidy in Pseudomonas aeruginosa are disclosed. Mucoidy is a critical P. aeruginosa virulence factor in cystic fibrosis that has been associated with biofilm develoment and resistance to phagocytosis. The present invention provides for detecting the switch from nonmucoid to mucoid state as caused by the interaction of the algU gene product, algU, with RNA polymerase. Inactivation of algU results in a loss of expression of genes, such as algD, dependent on algU for transcription. Also disclosed is a novel alginate biosynthesis heterologous expression system for use in screening candidate substances that inhibit conversion to mucoidy by inhibiting the interaction of algU with the RNA polymerase holoenzyme.
AN 96:103875 USPATFULL
TI Detection of conversion to mucoidy in Pseudomonas aeruginosa infecting cystic fibrosis patients involving the algu gene
IN Deretic, Vojo, San Antonio, TX, United States
Martin, Daniel W., San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5573910 19961112
AI US 1994-260202 19940615 (8)
RLI Continuation-in-part of Ser. No. US 1993-17114, filed on 12 Feb 1993
DT Utility
FS Granted
EXNAM Primary Examiner: Zitomer, Stephanie W.; Assistant Examiner: Rees, Dianne
LREP Arnold White & Durkee
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 22 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 3374
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 128 OF 177 USPATFULL
AB The present invention provides a polypeptide that is non-toxic in E. coli. The disclosed polypeptide comprises at least one antigenic sequence present in P.IA of N. gonorrhoeae and at least one antigenic sequence present in P.IB of N. gonorrhoeae. Further, the disclosed polypeptide of the invention is fused to a carrier peptide.
AN 96:75121 USPATFULL

TI Recombinant hybrid porin epitopes
IN Goldstein, Neil I., West Orange, NJ, United States
Tackney, Charles T., Brooklyn, NY, United States
PA Imclone Systems Incorporated, New York, NY, United States (U.S. corporation)
PI US 5547670 19960820
AI US 1993-124369 19930920 (8)
RLI Continuation of Ser. No. US 1991-669528, filed on 14 Mar 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Nucker, Christine M.; Assistant Examiner: Scheiner, Laurie
LREP Feit, Irving N., Gallagher, Thomas C.
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 985
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 129 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The alternative sigma factor sigma(D) directs transcription of a number of genes involved in chemotaxis, motility, and autolysis in Bacillus subtilis (sigma(D) regulon). The activity of SigD is probably in contrast to that of FlgM, which acts as an antisigma factor and is responsible for the coupling of late flagellar gene expression to the assembly of the hook-basal body complex. We have characterized the effects of an in-frame **deletion** mutation of flgM. By transcriptional fusions to lacZ, we have shown that in FlgM-depleted strains there is a 10-fold increase in transcription from three different sigma(D)-dependent promoters, i.e., Phag, PmotAB, and PfliDST. The number of flagellar filaments was only slightly increased by the flgM mutation. Overexpression of FlgM from a multicopy plasmid under control of the isopropyl-beta-n-thiogalactopyranoside-inducible spac promoter drastically reduced the level of transcription from the hag promoter. On the basis of these results, we conclude that, as in **Salmonella** typhimurium, FlgM inhibits the activity of SigD, but an additional element is involved in determining the number of flagellar filaments.
AN 96:427045 SCISEARCH
GA The Genuine Article (R) Number: UN518
TI ROLE OF FLGM IN SIGMA(D)-DEPENDENT GENE-EXPRESSION IN BACILLUS-SUBTILIS
AU CARAMORI T; BARILLA D; NESSI C; SACCHI L; GALIZZI A (Reprint)
CS UNIV PAVIA, DIPARTIMENTO GENET & MICROBIOL A BUZZATI TRAV, VIA ABBIATEGRASSO 207, I-27100 PAVIA, ITALY (Reprint); UNIV PAVIA, DIPARTIMENTO GENET & MICROBIOL A BUZZATI TRAV, I-27100 PAVIA, ITALY; UNIV PAVIA, DIPARTIMENTO BIOL ANIM, I-27100 PAVIA, ITALY
CYA ITALY
SO JOURNAL OF BACTERIOLOGY, (JUN 1996) Vol. 178, No. 11, pp. 3113-3118. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 28
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 130 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 16
AB Mutations in the fliK gene of **Salmonella** typhimurium commonly cause failure to terminate hook assembly and initiate filament assembly (polyhook phenotype). Polyhook mutants give rise to pseudorevertants which are still defective in hook termination but have recovered the ability to assemble filament (polyhook-filament phenotype). The polyhook mutations have been found to be either frameshift or nonsense, resulting in truncation of the C terminus of FliK. Intragenic suppressors of frameshift

mutations were found to be ones that restored the original frame (and therefore the C-terminal sequence), but in most cases with substantial loss of natural sequence and sometimes the introduction of artificial sequence; in no cases did intragenic suppression occur when significant disruption remained within the C-terminal region. By use of a novel PCR protocol, in-frame **deletions** affecting the N-terminal and central regions of FliK were constructed and the resulting phenotypes were examined. Small **deletions** resulted in almost normal hook length control and almost wild-type swarming. Larger **deletions** resulted in loss of control of hook length and poor swarming. The largest **deletions** severely affected filament assembly as well as hook length control. Extragenic suppressors map to an unlinked gene, flhB, which encodes an integral membrane protein (T. Hirano, S. Yamaguchi, K. Oosawa, and S.-I. Aizawa, J. Bacteriol. 176:5439-5449, 1994; K. Kutsukake, T. Minamino, and T. Yokoseki, J. Bacteriol. 176:7625-7629, 1994). They were either point mutations in the C-terminal cytoplasmic region of FlhB or frameshift or nonsense mutations close to the C terminus. The processes of hook and filament assembly and the roles of FliK and FlhB in these processes are discussed in light of these and other available data. We suggest that FliK measures hook length and, at the appropriate point, sends a signal to FlhB to switch the substrate specificity of export from hook protein to late proteins such as **flagellin**.

AN 1996:322906 BIOSIS
DN PREV199699045262
TI Mutations of fliK and flhB affecting flagellar hook and filament assembly in **Salmonella** typhimurium.
AU Williams, Andrew W.; Yamaguchi, Shigeru; Togashi, Fumiko; Aizawa, Shin-Ichi; Kawagishi, Ikuro; Macnab, Robert M. (1)
CS (1) Dep. Mol. Biophys. Biochem., Yale Univ., New Haven, CT 06520-8114 USA
SO Journal of Bacteriology, (1996) Vol. 178, No. 10, pp. 2960-2970. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 131 OF 177 MEDLINE DUPLICATE 17
AB The emergence in several countries of the monophasic serogroup D1 serovar **Salmonella** 9,12:l,v:- provided the opportunity to study its evolutionary origin. According to current models, such a variant serovar could have arisen by horizontal transfer of a new flagellar gene to a preexisting monophasic **Salmonella** strain or, alternatively, by the loss of the phase 2 flagellar gene of an originally biphasic **Salmonella** strain. Five known serovars of **Salmonella**, S. panama, S. kapemba, S. goettingen, S. zaiman, and S. mendoza, could have been possible ancestors of the new variant. The profiles of the insertion element IS200, which has been shown to provide phylogenetic markers for serogroup D1 **salmonellae**, were analyzed in relation to the restriction fragment length polymorphisms of the phase 2 flagellar gene. Together they provide unequivocal evidence that **Salmonella** 9,12:l,v:- arose from a strain of S. goettingen. Analysis of the flj operon of the variant indicated that loss of phase 2 flagellar antigen expression occurred through **deletion** of the hin gene and adjacent DNA, thereby blocking the phase 2 flagellar gene in the off position.

AN 96378998 MEDLINE
DN 96378998 PubMed ID: 8784561
TI Evolutionary origin of a monophasic **Salmonella** serovar, 9,12:l,v:-, revealed by IS200 profiles and restriction fragment polymorphisms of the fljB gene.
AU Burnens A P; Stanley J; Sechter I; Nicolet J
CS Institute for Veterinary Bacteriology, University of Berne, Switzerland.. BURNENS@VBI.UNIBE.CH
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1996 Jul) 34 (7) 1641-5. Journal code: 7505564. ISSN: 0095-1137.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199612
ED Entered STN: 19970128
Last Updated on STN: 19990129
Entered Medline: 19961209

L4 ANSWER 132 OF 177 USPATFULL
AB This invention relates to flagella-less strains of Borrelia and to novel methods for use of the microorganisms as vaccines and in diagnostic assays. Although a preferred embodiment of the invention is directed to Borrelia burgdorferi, the present invention encompasses flagella-less strains of other microorganisms belonging to the genus Borrelia. Accordingly, with the aid of the disclosure, flagella-less mutants of other Borrelia species, e.g., B. coriacei, which causes epidemic bovine abortion, B. anserina, which causes avian spirochetosis, and B. recurrentis and other Borrelia species causative of relapsing fever, such as Borrelia hermsii, Borrelia turicatae, Borrelia duttoni, Borrelia persica, and Borrelia hispanica, can be prepared and used in accordance with the present invention and are within the scope of the invention. Therefore, a preferred embodiment comprises a composition of matter comprising a substantially pure preparation of a strain of a flagella-less microorganism belonging to the genus Borrelia.
AN 95:66995 USPATFULL
TI Flagella-less borrelia
IN Barbour, Alan G., San Antonio, TX, United States
Bundoc, Virgilio, San Antonio, TX, United States
PA University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5436000 19950725
AI US 1991-641143 19910111 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Sidberry, Hazel F.
LREP Arnold, White & Durkee
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1300

L4 ANSWER 133 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 18
AB The fliD genes of **Salmonella** typhimurium and Escherichia coli encode the filament-cap protein of the flagellar apparatus, which facilitates the polymerization of endogenous **flagellin** at the tips of the growing filaments. Previous sequence analysis of this operon in both organisms has revealed that the fliD gene constitutes an operon together with two additional genes, fliS and fliT. Based on the **gene-disruption** experiment in E. coli, both the fliS and fliT genes have been postulated to be necessary for flagellation. In the present study, we constructed S. typhimurium mutants in which either fliS or fliT on the chromosome was specifically disrupted. Both mutants were found to produce functional flagella, indicating that these genes are dispensable for motility development in S. typhimurium. However, flagellar filaments produced by the fliS mutant were much shorter than those produced by the wild-type strain. This indicates that the fliS mutation affects the elongation step of filament assembly. The excretion efficiency of **flagellin** was examined in the fliD-mutant background, where the exported **flagellin** molecules cannot assemble onto the hooks, resulting in their excretion into the culture media. We found that the amount of **flagellin** excreted was much reduced by the flis mutation. Based on these results, we conclude that FliS facilitates the export of **flagellin** through the flagellum-specific export pathway.

AN 1995:398287 BIOSIS
DN PREV199598412587
TI Functional analysis of the flagellar genes in the fliD operon of **Salmonella** typhimurium.
AU Yokoseki, Tatsuki; Kutsukake, Kazuhiro (1); Ohnishi, Kouhei; Lino, Tetsuo
CS (1) Fac. Applied Biol. Sci., Hiroshima Univ., Kagamiyama 1-4-4, Higashi-Hiroshima, Hiroshima 739 Japan
SO Microbiology (Reading), (1995) Vol. 141, No. 7, pp. 1715-1722. ISSN: 1350-0872.
DT Article
LA English

L4 ANSWER 134 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 19
AB We have isolated spontaneous mutants of **Salmonella** typhimurium which can swim in the presence of antifilament antibodies. The molecular masses of **flagellins** isolated from these mutants were smaller than that (52 kDa) of wild-type **flagellin**. Two mutants which produced the smallest **flagellins** (42 and 41 kDa) were selected, and the domain structures of the **flagellins** were analyzed by trypsin digestion and then subjected to amino acid sequencing. The two **flagellins** have **deletions** at Ala-204 to Lys-292 and Thr-183 to Lys-279, respectively. These **deleted** parts belong to the outer domain (D3) of **flagellin**, which is believed to be at the surface of the filament. These mutant filaments aggregated side by side in the presence of salt, resulting in disordered motility.
AN 1995:159001 BIOSIS
DN PREV199598173301
TI Flagellar filament structure and cell motility of **Salmonella** typhimurium mutants lacking part of the outer domain of **flagellin**
AU Yoshioka, Kyoto; Aizawa, Shin-Ichi (1); Yamaguchi, Shigeru
CS (1) Dep. Biosci., Teikyo Univ., 1-1 Toyosatodai, Utsunomiya 320 Japan
SO Journal of Bacteriology, (1995) Vol. 177, No. 4, pp. 1090-1093. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 135 OF 177 USPATFULL
AB The present invention is concerned with vaccine for combating Treponema hyodysenteriae infection in swine containing proteins or polypeptides typical of the hemolysin protein of Treponema hyodysenteriae or containing recombinant polynucleotides having as part thereof a polynucleotide coding for said protein or polypeptide, and also is concerned with the preparation of said proteins, polypeptides and polynucleotides.
AN 94:99829 USPATFULL
TI Treponema hyodysenteriae vaccine
IN Muir, Susie Jane, Weesp, Netherlands
Koopman, Marcel B. H., Weesp, Netherlands
Kusters, Johannes G., Weesp, Netherlands
PA Duphar International Research B.V., Weesp, Netherlands (non-U.S. corporation)
PI US 5364774 19941115
AI US 1992-965668 19921021 (7)
PRAI NL 1991-202766 19911025
NL 1992-202274 19920724
DT Utility
FS Granted
EXNAM Primary Examiner: Ellis, Joan
LREP Stevens, Davis, Miller & Mosher
CLMN Number of Claims: 2
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 962
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 136 OF 177 USPATFULL
AB The invention relates to nucleic acid segments useful in the construction of expression vectors for expression of heterologous polypeptides directed to particular areas of the host cell. Selected constructs direct production of polypeptides to the outer membrane surface of the cell. Other constructs direct expression of heterologous polypeptides to the inner membrane/periplasm of the host cell. Transformed host cells are potentially useful for the production of vaccines or immunogens elicited in response to antigens expressed on the outer membranes of the host cells.
AN 94:90955 USPATFULL
TI Membrane expression of heterologous genes
IN Niesel, David W., League City, TX, United States
Moncrief, J. Scott, Galveston, TX, United States
Phillips, Linda H., Galveston, TX, United States
PA Board of Regents, The University of Texas, Austin, TX, United States (U.S. corporation)
PI US 5356797 19941018
AI US 1991-792525 19911115 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Schwartz, Richard A.; Assistant Examiner: Guzo, David
LREP Arnold, White & Durkee
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 137 OF 177 USPATFULL
AB This invention provides a fusion molecule comprising a DNA sequence encoding a thioredoxin-like protein fused to the DNA sequence encoding a selected heterologous peptide or protein. The peptide or protein may be fused to the amino terminus of the thioredoxin-like molecule, the carboxyl terminus of the thioredoxin-like molecule, or within the thioredoxin-like molecule, for example at the active-site loop of said molecule. Expression of this fusion molecule under the control of a regulatory sequence capable of directing its expression in a desired host cell, produces high levels of stable and soluble fusion protein. The fusion protein, located in the bacterial cytoplasm, may be selectively released from the cell by osmotic shock or freeze/thaw procedures. It may be optionally cleaved to liberate the soluble, correctly folded heterologous protein from the thioredoxin-like portion.
AN 94:20081 USPATFULL
TI Peptide and protein fusions to thioredoxin and thioredoxin-like molecules
IN McCoy, John, Reading, MA, United States
LaVallie, Edward R., Tewksbury, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 5292646 19940308
AI US 1992-921848 19920728 (7)
DCD 20101214
RLI Continuation-in-part of Ser. No. US 1991-745382, filed on 14 Aug 1991 which is a continuation-in-part of Ser. No. US 1991-652531, filed on 6 Feb 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Bugaisky, G. E.
LREP Meinert, Maureen C., DesRosier, Thomas J., Eisen, Bruce M.
CLMN Number of Claims: 24

ECL Exemplary Claim: 21
DRWN 7 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1565
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 138 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The overproduction of flagella is a distinguishing characteristic of Proteus mirabilis swarmer cell differentiation. The synthesis of **flagellin**, the principal protein composing the flagellar filament, is coordinately regulated as part of a larger regulon of genes whose expression is a prerequisite in urinary pathogenesis. In this report, the regulation of expression of the flaA locus, comprising flaA and flaB, two tandemly linked and nearly identical copies of **flagellin** -encoding genes, is examined. Transcriptional expression studies reveal that flaA, but not flaB, is expressed by wild-type cells, and flaA transcription increases eightfold during differentiation. The flaA transcriptional start site for both swimmer and swarmer cells was determined to be located at a guanine, 8 bases downstream of the flaA sigma(28) promoter. FlaA(-) mutants are nonmotile and undifferentiated and do not synthesize **flagellin**, while FlaB(-) mutants are wild type, thus verifying that FlaA is the sole **flagellin** produced by wild-type cells and that flaB is silent. FlaA(-) mutants frequently revert to a Mot(+) phenotype that is antigenically distinct from that of wild-type cells. Southern blot analysis of the flaA. Mot(+) revertants reveals a **deletion** of between 2 and 7 kb in the flaA locus. Biochemical analyses of revertant **flagellin** indicate major changes in protein size and composition but conservation of the first 28 N-terminal residues. The result of this process is to produce an antigenically distinct flagellum that may be significant in ensuring the survival of P. mirabilis during pathogenesis.
AN 94:751656 SCISEARCH
GA The Genuine Article (R) Number: PT620
TI EXPRESSION OF MULTIPLE **FLAGELLIN**-ENCODING GENES OF PROTEUS-MIRABILIS
AU BELAS R (Reprint)
CS UNIV MARYLAND, INST BIOTECHNOL, CTR MARINE BIOTECHNOL, 600 E LOMBARD ST, BALTIMORE, MD, 21202 (Reprint)
CYA USA
SO JOURNAL OF BACTERIOLOGY, (DEC 1994) Vol. 176, No. 23, pp. 7169-7181. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 54
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 139 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The regulation of **flagellin** gene expression in Bacillus subtilis was examined in vivo by means of a lacZ translational fusion to the **flagellin** structural gene (hag). We have tested the effects of two known mutations (flaA4 and flaA15) in the major flagellar operon and of three **deletions**. One **deletion** was in frame in the fliI cistron, one was out of frame in the fliK cistron, and the last spanned about 21 kb of the flaA operon. In all instances, the expression of the **flagellin** gene was defective. **Flagellin** gene expression was restored in the strain with the 21-kb **deletion** by overexpression of the sigD gene under control of the isopropyl-beta-D-thiogalactopy- ranoside (IPTG)-inducible spae promoter. These results indicate that transcription of the **flagellin** gene is dependent on the formation of the flagellar basal body but that such a requirement can be bypassed by overexpression of sigD. Lack of expression of hag was observed in the presence of flaD1, flaD2, and Delta sin mutations as well.
AN 94:462104 SCISEARCH
GA The Genuine Article (R) Number: NY398

TI COUPLING OF **FLAGELLIN** GENE-TRANSCRIPTION TO FLAGELLAR ASSEMBLY IN BACILLUS-SUBTILIS
AU BARILLA D; CARAMORI T; GALIZZI A (Reprint)
CS UNIV PAVIA, DIPARTIMENTO GENET & MICROBIOL A BUZZATI TRAV, VIA ABBIATEGRASSO 207, I-27100 PAVIA, ITALY (Reprint); UNIV PAVIA, DIPARTIMENTO GENET & MICROBIOL A BUZZATI TRAV, I-27100 PAVIA, ITALY
CYA ITALY
SO JOURNAL OF BACTERIOLOGY, (AUG 1994) Vol. 176, No. 15, pp. 4558-4564. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 40
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 140 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 20
AB The sigma-D form of RNA polymerase from Bacillus subtilis has been shown previously to direct the synthesis of several transcription units bearing genes for **flagellin**, motility proteins, and autolysins. In this report, we describe an operon of genes transcribed from the sigma-D-dependent promoter P-D-1. We have identified three complete open reading frames and one partial one downstream of this promoter, immediately upstream is the previously identified comF locus. The P-D-1 operon encodes the presumptive B. subtilis homologs of two **Salmonella** typhimurium late flagellar genes, flgM and flgK. Also present in this operon are two genes of unknown function, orf139 and orf160, whose products show similarities to the eukaryotic cytoskeletal proteins myosin and vimentin, respectively. orf139 and orf160 may encode proteins that form extended alpha-helical secondary structures and coiled-coil quaternary structures which may be filamentous components of the gram-positive bacterial flagellum. We have characterized the B. subtilis flgM gene further by constructing an in-frame **deletion** mutation, flgM-DELTA-80, and creating strains of B. subtilis in which this allele has replaced the wild-type copy. By primer extension analysis of cellular RNA, we have shown that the flgM-DELTA-80 mutation relieves the block to transcription of two other sigma-dependent operons imposed by an unlinked mutation in a gene directing early flagellar synthesis. We conclude that, as in the case of S. typhimurium, early flagellar synthesis in B. subtilis is coupled to late flagellar synthesis through repression of sigma-D-dependent transcription by the flgM gene product.
AN 1994:404850 BIOSIS
DN PREV199497417850
TI Identification of flagellar synthesis regulatory and structural genes in a sigma-D-dependent operon of Bacillus subtilis.
AU Mirel, Daniel B.; Lauer, Peter; Chamberlin, Michael J. (1)
CS (1) Div. Biochem. Molecular Biol., Univ. Calif., Berkeley, 401 Barker Hall, Berkeley, CA 94720-3202 USA
SO Journal of Bacteriology, (1994) Vol. 176, No. 15, pp. 4492-4500. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 141 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 21
AB To identify the major antigenic determinant of native **Salmonella** flagella of antigenic type d, we constructed a series of mutated fliC-d genes with **deletions** and amino acid alterations in hypervariable region IV and in regions of putative epitopes as suggested by epitope mapping with synthetic octameric peptides (T. M. Joys and F. Schodel, Infect. Immun. 59:3330-3332, 1991). The expressed product of most of the mutant genes, with **deletions** of up to 92 amino acids in region IV, assembled into functional flagella and conferred motility on **flagellin**-deficient hosts. Serological analysis of these flagella

with different anti-d antibodies revealed that the peptide sequence centered at amino acids 229 to 230 of **flagellin** was a dominant B-cell epitope at the surface of d flagella, because replacement of these two amino acids alone or together with their flanking sequence by a tripeptide specified by a linker sequence eliminated most reactivity with antisera against wild-type d flagella as tested by enzyme-linked immunosorbent assay or by Western immunoblot. Functional analysis of the mutated **flagellin** genes with or without an insert suggested that amino acids 180 to 214 in the 5' part of hypervariable region IV (residues 181 to 307 of the total of 505) is important to the function of flagella. The hybrid proteins formed by insertion of peptide sequence pre-S1 12-47 of hepatitis B virus surface antigen into the **deleted** **flagellins** assembled into functional flagella, and antibody to the pre-S1 sequence was detected after immunization of mice with the hybrid protein. This suggests that such mutant **flagellins** containing heterologous epitopes have potential as vaccines.

AN 1994:226104 BIOSIS
DN PREV199497239104
TI Hypervariable region IV of **Salmonella** gene fliC-d encodes a dominant surface epitope and a stabilizing factor for functional flagella.
AU He, Xiao-Song; Rivkina, Marianne; Stocker, Bruce A. D.; Robinson, William S. (1)
CS (1) Dep. Med., Stanford Univ. Sch. Med., Stanford, CA 94305 USA
SO Journal of Bacteriology, (1994) Vol. 176, No. 8, pp. 2406-2414. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 142 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 22
AB **Salmonella** typhimurium ST39 exhibits reduced virulence in mice and decreased survival in mouse macrophages compared with the parent strain SL3201. Strain ST39 is nonmotile, carries an indeterminate **deletion** in and near the flgB operon, and is defective in the mviS (mouse virulence **Salmonella**) locus. In flagellum-defective strains, the flgM gene product of S. typhimurium negatively regulates flagellar genes by inhibiting the activity of FliA, the **flagellin** -specific sigma factor. In this study flgM of wild-type S. typhimurium LT2 was found to complement the mviS defect in ST39 for virulence in mice and for enhanced survival in macrophages. Transduction of flgM.:Tn10dCm into the parent strain SL3201 resulted in attenuation of mouse virulence and decreased survival in macrophages. However, a flgM-fli4 double mutant was fully virulent in mice and survived in macrophages at wild-type levels. Thus, the absolute level of FliA activity appears to affect the virulence of S. typhimurium SL3201 in mice. DNA hybridization studies showed that flgM-related sequences were present in species other than **Salmonella** typhimurium and that sequences related to that of fliA were common among members of the family Enterobacteriaceae. Our results demonstrate that flgM and fliA, two genes previously shown to regulate flagellar operons, are also involved in the regulation of expression of virulence of S. typhimurium and that this system may not be unique to the genus **Salmonella**.
AN 1994:109144 BIOSIS
DN PREV199497122144
TI Mutation of flgM attenuates virulence of **Salmonella** typhimurium, and mutation of fliA represses the attenuated phenotype.
AU Schmitt, Clare K.; Darnell, Stephen C.; Tesh, Vernon L.; Stocker, Bruce A. D.; O'Brien, Alison D. (1)
CS (1) Dep. Microbiol. Immunol., Uniformed Serv. Univ. Health Sci., 4301 Jones Bridge Rd., Bestheda, MD 20814-4799 USA
SO Journal of Bacteriology, (1994) Vol. 176, No. 2, pp. 368-377. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 143 OF 177 MEDLINE

AB Plasmid pLS408 includes gene fliC(d) specifying **Salmonella flagellin** of antigenic type d with an in vitro **deletion** of a 48 base-pair EcoRV fragment in its central hypervariable antigenically-determinant region IV. Oligonucleotides specifying peptide epitopes of antigens of unrelated pathogens inserted, in correct orientation, at the unique EcoRV site of pLS408 specify chimeric **flagellins** and, in many instances, cause production of functional flagella when the plasmid is placed in a **flagellin**-deficient delta aroA live-vaccine strain of **Salmonella** dublin. The foreign epitope is then exposed at the surface of the flagellar filaments, as shown by the immobilizing effect of anti-epitope antibody and by immunogold electron-microscopy. The live-vaccine strain with a foreign epitope at the surface of its flagella when administered to mice by injection nearly always causes production of antibody with affinity for the foreign epitope and, sometimes, also for the source protein. Repeated injection of the live vaccine with an epitope of Streptococcus pyogenes type 5 M protein as insert caused production of opsonizing antibody and conferred partial protection against Streptococcus challenge. Injection of semi-purified chimeric flagella or **flagellin**, alone or with adjuvant, likewise causes antibody production, in one instance sufficient to give partial protection against influenza A virus challenge. Plasmid pLS408 with some inserts does not confer motility, either because the filaments produced are non-functional or because **flagellin** is made but not assembled or because little or no **flagellin** is produced. The features of a sequence which as insert determine production or non-production of functional flagella are not known. The effect of insertion of known T-cell epitopes and cellular immune responses to epitope inserts in **flagellin** are as yet little explored.

AN 94321840 MEDLINE

DN 94321840 PubMed ID: 7519231

TI Immune responses to epitopes inserted in **Salmonella flagellin**.

AU Stocker B A; Newton S M

CS Department of Microbiology and Immunology, Stanford University School of Medicine, CA 94305-5402.

SO INTERNATIONAL REVIEWS OF IMMUNOLOGY, (1994) 11 (2) 167-78. Ref: 24
Journal code: 8712260. ISSN: 0883-0185.

CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199408

ED Entered STN: 19940909
Last Updated on STN: 19960129
Entered Medline: 19940830

L4 ANSWER 144 OF 177 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 23

AB The flagellar genes flgA and flgM are located at the terminus of the region-I flagellar gene cluster on the chromosome of **Salmonella** typhimurium. The flgA gene is involved in P-ring formation of the flagellar basal body, whereas flgM encodes the anti-sigma factor which acts as a neg. regulator of the flagellar regulon. The nucleotide sequence of the DNA fragment contg. these flagellar genes and the adjacent region was detd. The flgA gene was found to encode a 219-amino-acid (aa) protein of 23556 Da. The N-terminal region of FlgA has the characteristics of a typical signal sequence, suggesting that FlgA may function in the periplasmic space where P-ring assembly takes place. The flgM gene was found to constitute an operon together with an ORF which encodes a 140-aa protein of 15,899 Da. A **gene disruption** mutant was constructed by inserting a cat gene

cartridge into the ORF on the chromosome. This mutant showed only weak motility, indicating that the product of the ORF is involved in flagellar formation. Therefore, this ORF was designated as flgN. Electron microscopic observation revealed that most of the flagellar structures produced by the flgN mutant are hook-basal body complexes lacking the filament portions. Based on these results, the authors concluded that the flgN product is required for the efficient initiation of filament assembly.

AN 1994:526587 CAPLUS
DN 121:126587
TI Sequence analysis of the flgA gene and its adjacent region in **Salmonella** typhimurium, and identification of another flagellar gene, flgN
AU Kutsukake, Kazuhiro; Okada, Tsutomu; Yokoseki, Tatsuki; Iino, Tetsuo
CS Faculty of Applied Biological Science, Hiroshima University, Higashi-Hiroshima, Hiroshima, 724, Japan
SO Gene (1994), 143(1), 49-54
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English

L4 ANSWER 145 OF 177 USPATFULL
AB This invention provides a fusion molecule comprising a DNA sequence encoding a thioredoxin-like protein fused to the DNA sequence encoding a selected heterologous peptide or protein. The peptide or protein may be fused to the amino terminus of the thioredoxin-like molecule, the carboxyl terminus of the thioredoxin-like molecule, or within the thioredoxin-like molecule, for example at the active-site loop of said molecule. Expression of this fusion molecule under the control of a regulatory sequence capable of directing its expression in a desired host cell, produces high levels of stable and soluble fusion protein. The fusion protein, located in the bacterial cytoplasm, may be selectively released from the cell by osmotic shock or freeze/thaw procedures. It may be optionally cleaved to liberate the soluble, correctly folded heterologous protein from the thioredoxin-like portion.
AN 93:104827 USPATFULL
TI Peptide and protein fusions to thioredoxin and thioredoxin-like molecules
IN McCoy, John, Reading, MA, United States
LaVallie, Edward R., Tewksbury, MA, United States
PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 5270181 19931214
AI US 1991-745382 19910814 (7)
RLI Continuation-in-part of Ser. No. US 1991-652531, filed on 6 Feb 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Wax, Robert A.; Assistant Examiner: Bugaisky, Gabriele E.
LREP Cserr, Luann, Meinert, Maureen C., Eisen, Bruce M.
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1404
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 146 OF 177 USPATFULL
AB The invention relates to a DNA segment encoding a Borrelia burgdorferi antigenic polypeptide. The invention also relates to a purified 30 kDa polypeptide isolated from a virulent strain of B. burgdorferi and to epitopic segments of the polypeptide with immunogenic potential. The 30 kDa protein provides a route for the development of immunodiagnostics for Lyme disease and related disorders. The 30 kDa protein and related

amino acid and DNA sequences may also be used for the immunization, for the detection of B. burgdorferi in human or animal tissues or body fluids, and also for the generation of specific antibodies for use in diagnosis, epidemiology, and prevention of Lyme disease.

AN 93:78691 USPATFULL
TI Virulence associated proteins in Borrelia burgdorferi (BB)
IN Norris, Steven J., Houston, TX, United States
Barbour, Alan G., San Antonio, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5246844 19930921
AI US 1991-781355 19911022 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Nucker, Christine M.; Assistant Examiner: Dubrule, Chris
LREP Arnold, White & Durkee
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1705
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 147 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 24
AB The flgM gene product has been shown to be a negative regulator of **flagellin** transcription in **Salmonella** typhimurium (K. L. Gillen and K. T. Hughes, J. Bacteriol. 173:2301-2310, 6453-6459, 1991; K. Ohnishi, K. Kutsukake, H. Suzuki, and T. Iino, Mol. Microbiol. 6:3149-3157, 1992). Mud-lac fusions to the flgM gene were isolated and used to characterize the regulation of flgM gene expression. Transcription of the flgM gene was decreased more than 30-fold in strains with the flagellar master regulatory genes, flhC and flhD, **deleted**. A class 2 flagellar defect caused a slight increase of flgM gene transcription unless a wild-type copy of the flgM gene was present, in which case transcription was decreased threefold. A **deletion** in the gene for the alternative sigma factor sigma-28 (FliA) caused a fourfold decrease in flgM expression. Insertional inactivation of a gene upstream of the flgM gene (flgA) in a fliA mutant strain caused transcription of the flgM gene to be decreased to a basal level. Northern (RNA) blot analysis confirmed the presence of two transcripts through the flgM gene, one which initiates upstream of the flgM gene and a second which initiates upstream of the flgA gene.
AN 1994:16867 BIOSIS
DN PREV199497029867
TI Transcription from two promoters and autoregulation contribute to the control of expression of the **Salmonella** typhimurium flagellar regulatory gene flgM.
AU Gillen, Karen L.; Hughes, Kelly T. (1)
CS (1) Dep. Microbiol. SC-42, Univ. Wash., Seattle, WA 98195 USA
SO Journal of Bacteriology, (1993) Vol. 175, No. 21, pp. 7006-7015. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 148 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Mutants of IncFII plasmid NR1 that have transposons inserted in the repA4 open reading frame (ORF) are not inherited stably. The repA4 ORF is located immediately downstream from the replication origin (ori). The repA4 coding region contains inverted-repeat sequences that are homologous to the terC inverted repeats located in the replication terminus of the Escherichia coli chromosome. The site of initiation of leading-strand synthesis for replication of NR1 is also located in repA4 near its 3' end. Transposon insertions between ori and the right-hand terC repeat resulted

in plasmid instability, whereas transposon insertions farther downstream did not. Derivatives that contained a 35-bp frameshift insertion in the repA4 ORF were all stable, even when the frameshift was located very near the 5' end of the coding region. This finding indicates that repA4 does not specify a protein product that is essential for plasmid stability. Examination of mutants having a nest of **deletions** with endpoints in or near repA4 indicated that the 3' end of the repA4 coding region and the site of leading-strand initiation could be **deleted** without appreciable effect on plasmid stability. **Deletion** of the pemI and pemK genes, located farther downstream from repA4 and reported to affect plasmid stability, also had no detectable effect. In contrast, mutants from which the right-hand terC repeat, or both right- and left-hand repeats, had been **deleted** were unstable. None of the insertion or **deletion** mutations in or near repA4 affected plasmid copy number. Alteration of the terC repeats by site-directed mutagenesis had little effect on plasmid stability. Plasmid stability was not affected by a tus mutation known to inactivate the termination function. Therefore, it appears that the overall integrity of the repA4 region is more important for stable maintenance of plasmid NR1 than are any of the individual known features found in this region.

AN 1993:477689 BIOSIS
DN PREV199396111289
TI Insertion and **deletion** mutations in the repA4 region of the IncFII plasmid NR1 cause unstable inheritance.
AU Jiang, Tao; Min, You-Nong; Liu, Wei; Womble, David D. (1); Rownd, Robert H.
CS (1) Center Mol. Biol., Wayne State University, Detroit, MI 48202 USA
SO Journal of Bacteriology, (1993) Vol. 175, No. 17, pp. 5350-5358. ISSN: 0021-9193.
DT Article
LA English

L4 ANSWER 149 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Vibrio parahaemolyticus possesses two distinct motility systems, the polar system used for swimming in liquid environments and the lateral system used for swarming over surfaces. Growth on surfaces induces swarmer cell differentiation and expression of the lateral motility system. Mutants, created by transposon mutagenesis of a clone expressing lateral **flagellin** and **gene disruption** in V. parahaemolyticus, were unable to swarm and failed to make lateral **flagellin**; therefore, unlike the case for the polar system, there is one gene (lafA) encoding lateral **flagellin**. In addition to lafA, other genes required for swarming but not for swimming were identified by gene replacement mutagenesis. The nucleotide sequence of the clone determined open reading frames (ORFs) and deduced amino acid sequences showed similarities to flagellar components of other bacteria: **flagellin**, hook-associated protein (HAP2), motor components, and flagellar sigma factor (sigma28). Many sigma28 factors have been shown to recognize cognate promoters; however, expression of lafA in Escherichia coli required LafS, and E. coli sigma28 did not substitute. Also, there were no sequences preceding genes encoding **flagellin** or HAP2 resembling the sigma28 consensus promoter. The product of the sigma-like gene seems to be a unique member of the sigma28 cluster. It appears the result of requiring expression for immunodetection of **flagellin** clones was that the sigma locus was fortuitously cloned, since the sigma and lafA loci were not contiguous in the chromosome. This work initiates identification and placement of genes in a scheme of control for swarmer cell differentiation; three levels have been identified in the transcriptional hierarchy.

AN 93:351526 SCISEARCH
GA The Genuine Article (R) Number: LE431
TI IDENTIFICATION OF GENES ENCODING COMPONENTS OF THE SWARMER CELL FLAGELLAR MOTOR AND PROPELLER AND A SIGMA-FACTOR CONTROLLING DIFFERENTIATION OF VIBRIO-PARAHAEMOLYTICUS

AU MCCARTER L L (Reprint); WRIGHT M E
CS UNIV WISCONSIN, DEPT BACTERIOL, MADISON, WI, 53706 (Reprint); AGOURON INST, LA JOLLA, CA, 92037
CYA USA
SO JOURNAL OF BACTERIOLOGY, (JUN 1993) Vol. 175, No. 11, pp. 3361-3371. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 54
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 150 OF 177 CAPLUS COPYRIGHT 2003 ACS
AB Nine **deletion** mutants of the **Salmonella** **flagellin** gene were constructed, each with a BamHI-SmaI linker inserted into 1 of the major flagellar epitopes, and DNA sequences encoding 4 protective epitopes of the hepatitis B virus surface antigen were inserted into the linker restriction sites. All hybrid genes were expressed correctly in **Salmonella**. The hybrid **flagellin** proteins were exported out of the bacterial cells and assembled into flagellar filaments and most rendered **Salmonella** motile. This system provides a new tool to study the relationship between the immunogenicity of foreign epitopes and their insertion sites in the **flagellin** protein.
AN 1993:647483 CAPLUS
DN 119:247483
TI A novel **Salmonella flagellin** expression system for heterologous epitopes
AU He, Xiao Song; Rivkina, Marianne; Hovi, Marianne; Stocker, Bruce A. D.; Robinson, William S.
CS Sch. Med., Stanford Univ., Stanford, CA, 94305, USA
SO Vaccines 93, [Annu. Meet.], 10th (1993), Meeting Date 1992, 427-31. Editor(s): Ginsberg, Harold S. Publisher: Cold Spring Harbor Lab., Cold Spring Harbor, N. Y.
CODEN: 59HUAJ
DT Conference
LA English

L4 ANSWER 151 OF 177 CAPLUS COPYRIGHT 2003 ACS
AB A review and discussion with 6 refs. The authors used plasmid pLS408 for expression of several amino acid sequences as part of the bacterial flagella. However, since some of the recombinants lost their ability to complement the **flagellin**-locus **deletion** of S. dublin SL5928, they have cloned gene fliC-j from S. typhi in order to use it as an alternative to gene fliC-d. Since fliC-j has a **deletion** in its hypervariable region the authors thought that it might tolerate what otherwise seems to be "problematic" insertions. As gene fliC-j itself could not complement the mutation of SL5928, the authors have added to the clone its downstream DNA region. The authors identified in this region what seems to be two new genes of the **Salmonella** flagellar regulon (termed fliU and fliV, encodes for proteins exhibiting mol. mass of 19 and 20 kDa). The fact that the amt. of **flagellin** assocd. with immobilized recombinant-plasmid-harboring strains was lower compared with "motile constructs" suggests that the level of free cytoplasmic monomers controls, in a way, **flagellin** biosynthesis.
AN 1993:666032 CAPLUS
DN 119:266032
TI **Salmonella flagellin** - carriers of heterologous antigens and identification of two new flagellar genes
AU Frankel, Gad; Moshitch, Sharon; Zangen, David; Friedmann, Adam; Doll, Linda
CS Dep. Membrane Res. Biophys., Weismann Inst. Sci., Rehovot, 76100, Israel
SO NATO ASI Series, Series A: Life Sciences (1993), 245(Biology of Salmonella), 391-4

CODEN: NALSDJ; ISSN: 0258-1213
DT Journal
LA English

L4 ANSWER 152 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 25
AB Bacterial **flagellin** has two domains: the polymerizing domain consisting of N- and C-terminal regions which are partly disordered in the monomeric state; and the central antigenic domain with compact globular structure. The polymerizing domain is highly conserved in **flagellins** from different species but the antigenic domain is diverse in sequence and size. Whereas the former has direct functional significance for bacterial motility, the latter has not been identified as having a specific function except for defining the distinct serotype of the bacterium. The sequence alignment of **flagellin** from S. paratyphi with proteins of known three-dimensional structure reveals significant homology of the central 265 residue stretch with the bacterial serine protease, subtilisin. This homology is evident also in the comparison of the predicted secondary structure of **flagellin** with the observed secondary structural features in subtilisin. The **deletions**/insertions arising due to optimal alignment of the two proteins occur on the surface loops in the structure. Thus, a domain of S. paratyphi **flagellin** and subtilisin appear to have similar structural folds.
AN 1993:324349 BIOSIS
DN PREV199396032699
TI The antigenic domain of **flagellin** from **Salmonella** paratyphi shares a structural fold with subtilisin.
AU Grewal, N.; Salunke, D. M. (1)
CS (1) National Inst. Immunol., JNU Complex, New Delhi 110 067 India
SO FEBS (Federation of European Biochemical Societies) Letters, (1993) Vol. 322, No. 2, pp. 111-114.
ISSN: 0014-5793.
DT Article
LA English

L4 ANSWER 153 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB Bacterial flagellum consists of a basal body, a hook, HAP1 (hook-associated protein 1), HAP3, a long helical filament, and a cap (composed of HAP2), all connected in series. The mutant deficient in the HAP2 structural gene (fliD) of **Salmonella** typhimurium has flagella composed of only hook-HAP1-HAP3 and excretes **flagellin** monomers into the culture medium. However, when purified HAP2 was added to this mutant, the **flagellin** stopped leaking out and flagellar filaments grew. Turnover of HAP2 was not necessary for the growth of a filament. Therefore HAP2 facilitates the polymerization of endogenous **flagellin**, apparently without falling off the filament tip. This experimental system with exogenous HAP2 allowed us to synchronize filament growth; the average rate of filament growth can be estimated by measuring the length of grown filaments at various time periods in electron micrographs. The initial growth rate was about 30 nm/min, which corresponds to one **flagellin** per second.
AN 93235643 EMBASE
DN 1993235643
TI Flagellar growth in a filament-less **salmonella** fliD mutant supplemented with purified hook-associated protein 2.
AU Ikeda T.; Yamaguchi S.; Hotani H.
CS Department of Microbiology, School of Dentistry, Aichi-Gakum University, 1-100 Kusumoto-cho,Chikusa-ku, Nagoya 464, Japan
SO Journal of Biochemistry, (1993) 114/1 (39-44).
ISSN: 0021-924X CODEN: JOBIAO
CY Japan
DT Journal; Article
FS 004 Microbiology

029 Clinical Biochemistry
LA English
SL English

L4 ANSWER 154 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB The direction of rotation of the bacterial flagellum is determined by the flagellar switch. We have localized FliG, one of the switch proteins of **Salmonella** typhimurium, to the cytoplasmic face of the M ring of the flagellar basal body. This localization was made possible by the discovery of two spontaneous mutants in which the fliF (M ring) and fliG (switch) genes were fused in-frame. In the first mutant, a **deletion** of 7 base pairs at the 3' end of fliF resulted in an essentially full-length fusion protein. In the second mutant, a larger **deletion** resulted in a fusion in which 56 amino acids from the carboxyl terminus of FliF and 94 amino acids from the amino terminus of FliG were lost. Both strains were motile and underwent switching; the first strain had a clockwise bias, and the second strain had a counterclockwise bias. Gel electrophoresis and immunoblotting of isolated hook-basal-body complexes verified that they contained the fusion proteins. Electron microscopy revealed additional mass at the cytoplasmic face of the M ring, which could be decorated with anti-FliG antibody. We conclude that the natural location for FliG is at the cytoplasmic face of the M ring and that the stoichiometric ratio between FliF and FliG in wild-type cells is probably 1:1.
AN 92223969 EMBASE
DN 1992223969
TI Localization of the **Salmonella** typhimurium flagellar switch protein FliG to the cytoplasmic M-ring face of the basal body.
AU Francis N.R.; Irikura V.M.; Yamaguchi S.; DeRosier D.J.; Macnab R.M.
CS Molecular Biophysics/Biochem. Dept., Yale University,New Haven, CT 06511, United States
SO Proceedings of the National Academy of Sciences of the United States of America, (1992) 89/14 (6304-6308).
ISSN: 0027-8424 CODEN: PNASA6
CY United States
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L4 ANSWER 155 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The DnaK, DnaJ, and GrpE heat shock proteins are required for motility of Escherichia coli. Cells **deleted** for dnaK or dnaJ, or with some mutations in the dnaK or grpE gene, are nonmotile, lack flagella, exhibit a 10- to 20-fold decrease in the rate of synthesis of **flagellin**, and show reduced rates of transcription of both the flhD master operon (encoding FlhD and FlhC) and the fli4 operon (encoding sigma(F)). Genetic studies suggest that DnaK and Dnaj define a regulatory pathway affecting flhD and fliA synthesis that is independent of cyclic AMP-catabolite gene activator protein or the chemotaxis system.
AN 92:569792 SCISEARCH
GA The Genuine Article (R) Number: JP644
TI DNAK, DNAJ, AND GRPE ARE REQUIRED FOR FLAGELLUM SYNTHESIS IN ESCHERICHIA-COLI
AU SHI W Y; ZHOU Y N; WILD J; ADLER J; GROSS C A (Reprint)
CS UNIV WISCONSIN, DEPT BACTERIOL, MADISON, WI, 53706; UNIV WISCONSIN, DEPT BIOCHEM, MADISON, WI, 53706; UNIV WISCONSIN, DEPT GENET, MADISON, WI, 53706
CYA USA
SO JOURNAL OF BACTERIOLOGY, (OCT 1992) Vol. 174, No. 19, pp. 6256-6263.
ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH

REC Reference Count: 52
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 156 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB Two genes controlling motility functions in Bacillus subtilis were identified by DNA sequence analysis of a chromosomal fragment containing a strong promoter for e RNA polymerase. Previous studies had shown that this sigma(D)-dependent promoter controls synthesis of a 1.6-kb transcript in vivo and in vitro. Sequence analysis revealed that the 1.6-kb transcript contains two open reading frames coding for protein sequences homologous to the Escherichia coli motA and motB gene products, respectively, and ends in a rho-independent termination site. Direct evidence linking these genes to motility functions in B. subtilis was obtained by precise localization by polymerase chain reaction of Tn917 transposon insertion mutations of Mot- strains, isolated by Zuberi et al. (A. R. Zuberi, C. Ying, H. M. Parker, and G. W. Ordal, J., Bacteriol. 172:6841-6848, 1990), to within this mot operon. Replacement of each wild-type gene by in-frame **deletion** mutations yielded strains possessing paralyzed flagella and confirmed that both motA and motB are required for the motility of B. subtilis. These current findings support our earlier suggestions that sigma(D) in B. subtilis plays a central role in the control of gene expression for flagellar assembly, chemotaxis, and motility functions. sigma(F), the enteric homolog of sigma(D), controls similar functions in E. coli and **Salmonella** typhimurium, and these factors appear to be representative of a family of factors implicated in flagellar synthesis in many bacterial species, which we propose to designate the sigma-28 family.
AN 92:402402 SCISEARCH
GA The Genuine Article (R) Number: JB456
TI AN OPERON OF BACILLUS-SUBTILIS MOTILITY GENES TRANSCRIBED BY THE SIGMA-D FORM OF RNA-POLYMERASE
AU MIREL D B; LUSTRE V M; CHAMBERLIN M J (Reprint)
CS UNIV CALIF BERKELEY, DIV BIOCHEM & MOLEC BIOL, 401 BARKER HALL, BERKELEY, CA, 94720
CYA USA
SO JOURNAL OF BACTERIOLOGY, (JUL 1992) Vol. 174, No. 13, pp. 4197-4204. ISSN: 0021-9193.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 55
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 157 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 26
AB The mobility of the disordered terminal regions of **flagellin** was examined in detail based on 1H NMR chemical shifts and spin-lattice relaxation times in the rotating frame. Proteolytic fragments of **flagellin** with terminal **deletions** of different sizes were used to compare the dynamical properties of various N- and C-terminal segments. We found that dynamic properties of different terminal segments were similar to each other and were close to those of the heat-denaturated state of **flagellin**. The main chain of these terminal segments undergoes rapid motions with effective correlation times of 1.3-4.1 .times. 10-9 s. The terminal regions contain no large segments with well-defined structure. However, comparison with the random-coiled state of poly-L-lysine suggests significant structural constraints in the terminal regions (as well sa in the heat-denatured **flagellin**) which may reflect the existence of some highly fluctuating secondary structure, as suggested by earlier CD studies.
AN 1992:100719 BIOSIS
DN BA93:57269
TI MOBILITY OF THE TERMINAL REGIONS OF **FLAGELLIN** IN SOLUTION.
AU ISHIMA R; AKASAKA K; AIZAWA S-I; VONDERVISZT F

CS DEP. CHEMISTRY, FACULTY SCIENCE, KYOTO UNIVERSITY, SAKYO-KU, KYOTO 606-01, JPN.
SO J BIOL CHEM, (1991) 266 (35), 23682-23688.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L4 ANSWER 158 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The mobility of the disordered terminal regions of **flagellin** was examined in detail based on H-1 NMR chemical shifts and spin-lattice relaxation times in the rotating frame. Proteolytic fragments of **flagellin** with terminal **deletions** of different sizes were used to compare the dynamical properties of various N- and C-terminal segments.

We found that dynamic properties of different terminal segments were similar to each other and were close to those of the heat-denatured state of **flagellin**. The main chain of these terminal segments undergoes rapid motions with effective correlation times of 1.3-4.1 x 10(-9) s. The terminal regions contain no large segments with well-defined structure. However, comparison with the random-coiled state of poly-L-lysine suggests significant structural constraints in the terminal regions (as well as in the heat-denatured **flagellin**) which may reflect the existence of some highly fluctuating secondary structure, as suggested by earlier CD studies.
AN 91:687079 SCISEARCH
GA The Genuine Article (R) Number: GV319
TI MOBILITY OF THE TERMINAL REGIONS OF **FLAGELLIN** IN SOLUTION
AU ISHIMA R; AKASAKA K (Reprint); AIZAWA S I; VONDERVISZT F
CS KYOTO UNIV, FAC SCI, DEPT CHEM, SAKYO KU, KYOTO 60601, JAPAN (Reprint); KYOTO UNIV, FAC SCI, DEPT CHEM, SAKYO KU, KYOTO 60601, JAPAN; RES DEV CORP JAPAN, MOLEC DYNAM ASSEMBLY PROJECT, TSUKUBA 30026, JAPAN
CYA JAPAN
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1991) Vol. 266, No. 35, pp. 23682-23688.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 30
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 159 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The previously cloned DNA fragment which complements the behavioral defects of the che-1 and che-3 mutations of Rhizobium melilotic codes for two nearly identical (93%) **flagellin** genes. A wild-type copy of one of the two genes (flaA) but not the other (flaB) can complement the mutations. The behavior and flagellar morphology of newly isolated strains carrying insertion and **deletion** mutations or various combinations of these mutations demonstrated that either gene product alone can form functional flagellar filaments but when both gene products are present they interact in the formation of filaments. Both the nucleic acid sequences of the genes and the deduced amino acid sequences of the proteins from strain Rm1021 showed significant differences from the sequences determined previously for strain RU10406. (E. Pleier and R. Schmitt, J. Bacteriol. 171:1467-1475, 1989). The tandem arrangement of the two genes is stable, although in vitro recombination between them gave rise to a strain with wild-type behavior.
AN 91:363094 SCISEARCH
GA The Genuine Article (R) Number: FT129
TI MUTATIONS IN THE 2 **FLAGELLIN** GENES OF RHIZOBIUM-MELILOTI
AU BERGMAN K (Reprint); NULTY E; SU L H
CS NORTHEASTERN UNIV, DEPT BIOL, BOSTON, MA, 02115 (Reprint)
CYA USA
SO JOURNAL OF BACTERIOLOGY, (1991) Vol. 173, No. 12, pp. 3716-3723.
DT Article; Journal
FS LIFE

LA ENGLISH
REC Reference Count: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 160 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 27
AB A synthetic 48-bp oligonucletide specifying the N-terminal 15 amino acids of M protein of Streptococcus pyogenes type 5 (plus a CTA codon, to terminate translation of genes with the insert in reverse orientation) was inserted by blunt-end ligation at the site of the 48-bp EcoRV **deletion** in the **Salmonella flagellin** gene in plasmid pLS408 (S. M. C. Newton, C. O. Jacob, and B. A. D. Stocker, Science 244:70-72, 1989). The resulting plasmid was transferred from Escherichia coli via a restriction-negative **Salmonella** typhimurium strain into an aromatic-compound-dependent, **flagellin** -negative live-vaccine strain of **Salmonella** dublin to produce strain SL7127, which was motile. Expression of the inserted epitope in **flagellin** and its exposure at the flagellar filament surface were shown by immunoblotting and by the reaction of flagellate bacteria (immobilization, immunogold labeling) with antibody raised by injection of the corresponding synthetic peptide, S-M5(1-15). Rabbits immunized by injection of the live-vaccine strain with flagella composed of the chimeric **flagellin** or by injection of concentrated flagella from such bacteria developed antibodies reactive in an enzyme-linked immunosorbent assay with peptide S-M5(1-15) and with the large peptic-digest peptide pepM5. These antibodies were opsonic for type 5 streptococci. Mice that were given parenteral live SL7127 (six doses, each 1 .times. 106 to 2 .times. 106, over 8 weeks) developed titers of ca. 12,800 for M5-specific peptides and opsonizing activity for type 5 streptococci but not for type 24 streptococci. Sera from mice similarly immunized with a control live vaccine strain without an insert in the **flagellin** gene did not react with the M5-specific antigens. All of the five mice given the control strain, without an insert, died after challenge with type 5 streptococci or type 24 streptococci; by contrast, four of the five mice given strain SL7127, with an insert, survived the M5 challenge, but none of the five challenged with the type 24 strain survived. Therefore, our study shows that an M protein epitope can be expressed in the context of an unrelated protein and maintain its immunogenicity. Furthermore, we demonstrate that mice can be protected against a Streptococcus pyogenes type 5 challenge by immunization with a **Salmonella** live vaccine with flagella made of **flagellin** with an insert carrying a protective epitope of M5 protein but without the cross-reactive epitopes of the complete protein.
AN 1991:341594 BIOSIS
DN BA92:40969
TI EXPRESSION AND IMMUNOGENICITY OF A STREPTOCOCCAL M PROTEIN EPITOPE INSERTED IN **SALMONELLA FLAGELLIN**.
AU NEWTON S M C; KOTB M; POIRIER T P; STOCKER B A D; BEACHEY E H
CS DEP. MICROBIOL. IMMMUNOL., STANFORD UNIV. SCH. MED., STANFORD, CALIF. 94350.
SO INFECT IMMUN, (1991) 59 (6), 2158-2165.
CODEN: INFIBR. ISSN: 0019-9567.
FS BA; OLD
LA English

L4 ANSWER 161 OF 177 SCISEARCH COPYRIGHT 2003 THOMSON ISI
AB The complex flagellar filaments of Rhizobium meliloti are composed of two related (87% identical) **flagellins** that are encoded by closely linked, separately transcribed genes, flaA and flaB (E. Pleier and R. Schmitt, J. Bacteriol. 171:1467-1475, 1989). To elucidate the role of the subunits, A and B, in assembling the complex filament, the wild-type alleles were replaced with defective ones containing a 2,249-bp **deletion** (accompanied by substitution of a kanamycin resistance cartridge), which eliminates 74% of flaA (3' end) and 85% of flaB (5'

end). The resulting nonmotile, filamentless mutant, RU11011, was tested for complementation with wild-type flaA, flaB, and flaA flaB genes provided on the multiple-copy vector pRK290. Whereas flaA alone did not restore motility and filament production, both flaB and flaA flaB restored 20 to 30% of wild-type motility. Apparent causes of this reduced motility were fewer flagella per cell and/or shortened filaments sometimes ending in unusually thin, fragile structures. Tests with enzyme-linked antiflagellin antibodies indicated that flaA is expressed at higher levels than flaB and that multiple copies of flaA lead to reduced **flagellin** export. We conclude that the proximal portion of the complex filament is assembled from B subunits (not produced sufficiently to form full-length flagella) and that the distal portion is made from A subunits. Multiple copies of the strong flaA promoter may offset transcriptional controls that regulate the synthesis of flagellar structures required for **flagellin** export.

AN 91:160934 SCISEARCH
GA The Genuine Article (R) Number: FB988
TI EXPRESSION OF 2 RHIZOBIUM-MELILOTI **FLAGELLIN** GENES AND THEIR CONTRIBUTION TO THE COMPLEX FILAMENT STRUCTURE
AU PLEIER E; SCHMITT R (Reprint)
CS UNIV REGENSBURG, LEHRSTUHL GENET, W-8400 REGENSBURG, GERMANY
CYA GERMANY
SO JOURNAL OF BACTERIOLOGY, (1991) Vol. 173, No. 6, pp. 2077-2085.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 40
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L4 ANSWER 162 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 28
AB Terminal regions of **flagellin** from **Salmonella** typhimurium, residues 1 to 65 and 451 to 494, have no ordered tertiary structure in solution, which makes them very susceptible to proteolytic degradation. **Flagellin** was subjected to mild controlled proteolytic treatment with highly specific proteases to remove terminal segments from the disordered regions. It is demonstrated here that various fragments can be readily prepared that differ from each other in 1 .times. 103 to 2 .times. 103 Mr segments in their NH2- or COOH-terminal regions. Terminally **deleted** fragments of **flagellin** were used to clarify the role of the disordered regions in the self-assembly of **flagellin**. The polymerization ability of the fragments was tested by inducing filament formation with ammonium sulfate. We found that fragments of **flagellin** containing large terminal **deletions** could form straight filaments, although the stability of these filaments required high salt concentrations. Even a fragment lacking the whole mobile COOH-terminal part of **flagellin** and 36 residues from the NH2-terminal region could form long filaments. The fragments could be also polymerized onto native flagellar seeds, suggesting that the subunit packing of the filaments of fragments is similar to that of the native ones. The fragments could also copolymerize with native **flagellin**, resulting in various helical forms. Filaments of fragments were found to be straight at both pH 4.0 and pH 12.5, indicating that they might have lost their polymorphic ability. Our results show that the major part of the disordered terminal regions of **flagellin** is not essential for polymerization, but it does play an important role in stabilization of the filaments and in influencing their polymorphic conformation.
AN 1992:32227 BIOSIS
DN BA93:21502
TI ROLE OF THE DISORDERED TERMINAL REGIONS OF **FLAGELLIN** IN FILAMENT FORMATION AND STABILITY.
AU VONDERVISZT F; AIZAWA S-I; NAMBA K
CS ERATO, MOLECULAR DYNAMIC ASSEMBLY PROJECT, 5-9-5 TOKODAI, TSUKUBA 300-26,

JPN.
SO J MOL BIOL, (1991) 221 (4), 1461-1474.
CODEN: JMOBAK. ISSN: 0022-2836.
FS BA; OLD
LA English

L4 ANSWER 163 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 29
AB Strains of most **Salmonella** serovars produce either one (monophasic) or two (diphasic) antigenic forms of **flagellin** protein, but strains capable of expressing three or more serologically distinct **flagellins** ("complex" serovars) have occasionally been reported. A molecular genetic analysis of a triphasic strain of the normally diphasic serovar **Salmonella** rubislaw revealed that it has three **flagellin** genes, including the normal fliC (phase 1) and fliB (phase 2) chromosomal genes encoding type r and type e,n,x **flagellins**, respectively, and a third locus (herein designated as flpA) that is located on a large plasmid (pRKS01) and codes for a type d **flagellin**. The coding sequence of the plasmid-borne gene is similar to that of a phase 1 chromosomal gene, but the sequence of its promoter region is homologous to that of a phase 2 chromosomal gene. The irreversible loss of the ability to express a type d **flagellin** that occurs when the triphasic strain is grown in the presence of d antiserum is caused by **deletion** of part or all of the flpA gene. Thus, the molecular basis for the unusual serological reactions of the triphasic strain of S. rubislaw and, by inference, other complex serovars of **Salmonella** is explained. Plasmids of the type carried by the triphasic strain of S. rubislaw provide a mechanism for the generation of new serovars through the lateral transfer and recombination of **flagellin** genes.
AN 1991:180432 BIOSIS
DN BA91:95181
TI MOLECULAR GENETIC BASIS FOR COMPLEX FLAGELLAR ANTIGEN EXPRESSION IN A TRIPHASIC SEROVAR OF **SALMONELLA**.
AU SMITH N H; SELANDER R K
CS INST. MOL. EVOLUTIONARY GENETICS, MUELLER LAB., PENNSYLVANIA STATE UNIV., UNIVERSITY PARK, PA. 16802.
SO PROC NATL ACAD SCI U S A, (1991) 88 (3), 956-960.
CODEN: PNASA6. ISSN: 0027-8424.
FS BA; OLD
LA English

L4 ANSWER 164 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 30
AB Each of the two mutants isolated from a fliC (= hag, **flagellin** -deficient) Escherichia coli strain made motile by a plasmid carrying the fliC gene of **Salmonella** muenchen by selection for motility in the presence of anti-d (**Salmonella** flagellar antigen) serum had both lost and gained one or more subfactors of the wild-type antigen. In one mutant codon 246 was GAC (alanine) instead of GCC (asparagine); the other had a **deletion** of 105 base pairs, explicable by a 10 bp direct repeat, starting at bases 782 and 887. The in vitro removal of a 48 bp EcoRV(631)/EcoRV(679) fragment produced plasmid pLS408, which was found to lack a subfactor of wild-type antigen d but able to confer motility on **flagellin**-negative **Salmonella** sp. (and used for insertion of epitope-specifying oligonucleotides at its EcoRV site). Immunoblotting with absorbed and unabsorbed sera from rabbits immunized with E. coli with wild-type or mutated antigen d showed that the fusion proteins specified by .lambda. gt11 with the N-terminal part of gene lacZ joined to a restriction fragment coding for residues 145-391 of **flagellin** gave the same pattern of parent-specific and mutant-specific reactions as the flagellate bacteria. Four out of five similarly selected mutants had the same 105bp **deletion** as the first-isolated mutant; the fifth had a 72bp **deletion** made

possible by a 7-base pair direct repeat, starting at positions 649 and 721. All these changes in serological character without loss of function affected segment IV, specifying residues 182 to 308 of the total of 505, where there is little homology between different flagellar-antigen alleles.

AN 1991:226828 BIOSIS
DN BA91:118288
TI SEGMENT IV OF A **SALMONELLA FLAGELLIN** GENE SPECIFIES FLAGELLAR ANTIGEN EPITOPES.
AU NEWTON S M C; WASLEY R D; WILSON A; ROSENBERG L T; MILLER J F; STOCKER B A D
CS DEP. MICROBIOL. AND IMMUNOL., STANFORD UNIV. SCH. MED., STANFORD, CALIF. 94305-5402.
SO MOL MICROBIOL, (1991) 5 (2), 419-426.
CODEN: MOMIEE. ISSN: 0950-382X.
FS BA; OLD
LA English

L4 ANSWER 165 OF 177 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 31
AB Synthetic oligonucleotides specifying amino acid sequences identified as epitopes of various foreign antigens (cholera toxin subunit B, hepatitis B surface protein and others) have been inserted at an EcoRV-EcoRV **deletion** site in a cloned **Salmonella flagellin** gene; the resulting plasmids, when placed in **flagellin**-neg. Escherichia coli or **Salmonella** strains, caused prodn. of **flagellin** expressing the epitope. If the chimeric **flagellin** allowed formation of flagella, the epitope was exposed at the surface of the flagellar filaments. A .DELTA.aroA **flagellin**-neg. S. dublin live vaccine strain given plasmids carrying various chimeric **flagellin** genes was administered to lab. animals. Serum antibody specific for the foreign epitope was in all cases evoked by parenteral administration; oral route administration was effective in the case of two epitopes of hepatitis B surface protein but not effective for several other epitopes. Several i.p. inocula of the live vaccine strain with an insert corresponding to the 15 N-terminal amino acids of the M protein of Streptococcus pyogenes type 5 evoked M-specific antibody with opsonic activity, and the mice were (incompletely) protected against a lethal challenge of S. pyogenes type 5. The non-virulence of **Salmonella** sp. strains with complete blocks in the arom. biosynthesis pathway is discussed.
AN 1991:629862 CAPLUS
DN 115:229862
TI Aromatic-dependent **Salmonella** as live vaccine presenters of foreign epitopes as inserts in **flagellin**
AU Stocker, B. A. D.
CS Sch. Med., Stanford Univ., Stanford, CA, 94305-5402, USA
SO Research in Microbiology (1990), 141(7-8), 787-96
CODEN: RMCREW; ISSN: 0923-2508
DT Journal
LA English

L4 ANSWER 166 OF 177 MEDLINE
AB The flagellar basal body of **Salmonella** typhimurium consists of four rings surrounding a rod. The rod, which is believed to transmit motor rotation to the filament, is not well characterized in terms of its structure and composition. FlgG is known to lie within the distal portion of the rod, in the region where it is surrounded by the L and P rings, just before the rod-hook junction. The FlgC and FlgF proteins are also known to be flagellar basal-body components; by comparison of deduced and experimental N-terminal amino acid sequences we show here that FlgB is a basal-body protein. The flgB, flgC, flgF and flgG gene sequences and the deduced protein sequences are presented. The four proteins are clearly related to each other in primary sequence, especially toward the N and C termini, supporting the hypothesis (based on examination of basal-body

subfractions) that FlgB, FlgC and FlgF are, like FlgG, rod proteins. From this and other information we suggest that the rod is the cell-proximal part of a segmented axial structure of the flagellum, with FlgB, FlgC and FlgF located (in unknown order) in successive segments of the proximal rod, followed by FlgG located in the distal rod; the axial structure then continues with the hook, HAPs and filament. Although the rod is external to the cell membrane, none of the four rod proteins contains a consensus signal sequence for the primary export pathway; comparison with the experimentally determined N-terminal amino acid sequence indicates that FlgB has had its N-terminal methionine removed, while the other three are not processed at all. This demonstrates that these proteins are not exported by the primary cellular pathway, and suggests that they are exported by the same flagellum-specific pathway as the flagellar filament protein **flagellin**.. The observed sequence similarities among the rod proteins, especially a six-residue consensus motif about 30 residues in from the N terminus, may constitute a recognition signal for this pathway or they may reflect higher-order structural similarities within the rod.

AN 90172414 MEDLINE
DN 90172414 PubMed ID: 2129540
TI FlgB, FlgC, FlgF and FlgG. A family of structurally related proteins in the flagellar basal body of **Salmonella** typhimurium.
CM Erratum in: J Mol Biol 1990 Sep 20;215(2):331
AU Homma M; Kutsukake K; Hasebe M; Iino T; Macnab R M
CS Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT 06511.
NC AI12202 (NIAID)
GM 40335 (NIGMS)
SO JOURNAL OF MOLECULAR BIOLOGY, (1990 Jan 20) 211 (2) 465-77.
Journal code: 2985088R. ISSN: 0022-2836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-D00498; GENBANK-X52094
EM 199004
ED Entered STN: 19900601
Last Updated on STN: 19900601
Entered Medline: 19900410

L4 ANSWER 167 OF 177 USPATFULL
AB This invention concerns a method for producing a heterologous protein in a bacterial host cell such that the protein is exported from the host cell into the culture medium. The method involves culturing in a bacterial culture medium a genetically engineered bacterial strain containing a fusion DNA sequence comprising a first nucleotide sequence encoding at least an N-terminal portion of a **flagellin** protein and a second nucleotide sequence encoding the heterologous protein. The first nucleotide sequence is linked via its 3' terminus to the 5' terminus of the second nucleotide sequence, and the fusion DNA sequence is itself linked to an expression control sequence. In certain embodiments the first and second nucleotide sequences are linked by means of a linking nucleotide sequence encoding a selectively cleavable polypeptide, In those embodiments the resulting exported fusion protein will contain a selectively cleavable site at which the fusion protein may be selectively cleaved by chemical or enzymatic methods to produce the heterologous protein encoded for by the second nucleotide sequence of the fusion DNA sequence. The heterologous protein may then be separately recovered from any polypeptide fragment of **flagellin** or other proteinaceous material.

AN 89:7502 USPATFULL
TI Method for producing heterologous proteins
IN Stahl, Mark L., Arlington, MA, United States
LaVallie, Edward R., Melrose, MA, United States

PA Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 4801536 19890131
AI US 1987-57881 19870602 (7)
RLI Continuation-in-part of Ser. No. US 1985-786749, filed on 11 Oct 1985, now abandoned
PRAI WO 1986-US2168 19861010
DT Utility
FS Granted
EXNAM Primary Examiner: Wiseman, Thomas G.; Assistant Examiner: Mays, Thomas D.
LREP Berstein, David L., Eisen, Bruce M.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1192
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 168 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 32
AB **Salmonella** typhi, the etiologic agent of typhoid fever, typically has only a phase-1 flagellar antigen, d, but some isolates, found only in Indonesia, have antigen j instead, and may have a second flagellar antigen, z66. It appears that intragenic recombination involving a directly repeated 11 bp sequence in the H1-d **flagellin** gene changed the flagellar antigen to j, by deleting 261 bp in its central, antigenically determinant, part. Sequencing of the hypervariable regions of genes H1-d and H1-j, and hybridization of such genes, after amplification by the polymerase chain reaction, with oligonucleotide probes specific for the **deleted** segment or for the sequence produced by the recombination confirmed that all the j alleles have the postulated **deletion**. By applying the polymerase chain reaction to study S. typhi isolates from Jakarta, not previously tested in respect to flagellar antigen, we showed that gene H1-j was nearly as common as H1-d in these isolates.
AN 1989:492480 BIOSIS
DN BA88:119017
TI INTRAGENIC RECOMBINATION IN A **FLAGELLIN** GENE CHARACTERIZATION OF THE H1-J GENE OF **SALMONELLA**-TYPHI.
AU FRANKEL G; NEWTON S M C; SCHOOLNIK G K; STOCKER B A D
CS DEP. BIOPHYS., WEIZMANN INST. SCI., REHOVOT 76100, ISR.
SO EMBO (EUR MOL BIOL ORGAN) J, (1989) 8 (10), 3149-3152.
CODEN: EMJODG. ISSN: 0261-4189.
FS BA; OLD
LA English

L4 ANSWER 169 OF 177 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB Various **deletions** were introduced into the central region of Escherichia coli **flagellin** (497 residues) without destroying its ability to form flagellar filaments. The smallest **flagellin** retained only the N-terminal 193 residues and the C-terminal 117 residues, which are suggested to be the domains essential for filament formation.
AN 88171756 EMBASE
DN 1988171756
TI Construction of a minimum-size functional **flagellin** of Escherichia coli.
AU Kuwajima G.
CS Shionogi Research Laboratories, Shionogi & Co., Ltd., Fukushima-ku, Osaka 553, Japan
SO Journal of Bacteriology, (1988) 170/7 (3305-3309).
ISSN: 0021-9193 CODEN: JOBAAY
CY United States
DT Journal
FS 004 Microbiology

LA English
SL English

L4 ANSWER 170 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 33
AB Immunological methods were used to examine the **flagellin** production of **Salmonella** typhimurium strains that carried a mutation in one of the two possible genes for **flagellin** (H1 or H2) and also were incapable of expressing the other gene. Some mutants produced **flagellin** that was excreted into the culture medium; others accumulated **flagellin** intracellularly. These two phenotypes were detected in both H1 and H2 mutants. The mutation sites were mapped on the corresponding **deletion** map (consisting of 21 segments in the case of H1 and 31 segments in the case of H2). H1 and H2 mutations causing excretion of **flagellin** were clustered mainly in segment 12 and segment 6 from the proximal end, respectively, suggesting that the corresponding segments of the **flagellins** play a role in polymerization. Mutations causing accumulation in the cytoplasm were clustered in segments 19 to 21 of the H1 map and in segments 25 to 29 of the H2 map, suggesting that an essential region for **flagellin** transport exists toward the C terminus of **flagellin**.
AN 1987:129780 BIOSIS
DN BA83:68841
TI REGIONS OF **SALMONELLA**-TYPHIMURIUM **FLAGELLIN** ESSENTIAL FOR ITS POLYMERIZATION AND EXCRETION.
AU HOMMA M; FUJITA H; YAMAGUCHI S; IINO T
CS DEP. MOL. BIOPHYSICS BIOCHEM., YALE UNIV., NEW HAVEN, CONN. 06511-8112, USA.
SO J BACTERIOL, (1987) 169 (1), 291-296.
CODEN: JOBAAY. ISSN: 0021-9193.
FS BA; OLD
LA English

L4 ANSWER 171 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 34
AB Non-flagellate H2 mutants were isolated from a phase-2 stable strain, SJW806 H1-gt- H2-enxon vh2-, a derivative of S. typhimurium. By transductional crosses a **deletion** map and a recombination map of the H2 gene were made. There are 3 regions especially rich in non-flagellate mutational sites. By the use of the **deletion** map, mutational sites of 21 flagellar shape mutants were also determined. Most of them were located at 2 regions which coincide with 2 of the 3 regions rich in non-flagellate mutational sites. A gene, vh2, is closely linked to the promoter side of the H2 gene. Three-factor transductional crosses showed that the vh2 gene was on the left of the H2 gene in the present map. The H2 gene forms part of an operon with the distal gene rh1 which specifies the h1 repressor. Thus, a polarity effect of the H2 mutations on the expression of the rh1 gene was examined by observing whether a wild-type H1 allele introduced into the H2 mutants was expressed or not. Many of the H2 mutations were polar, and most of the strongly polar mutations were located in the left (promoter-proximal) half of the H2 gene, while most of the mutations in the right half of the gene were weakly polar or non-polar.
AN 1984:274367 BIOSIS
DN BA78:10847
TI GENETIC ANALYSIS OF H-2 THE STRUCTURAL GENE FOR PHASE 2 **FLAGELLIN** IN **SALMONELLA**-TYPHIMURIUM.
AU YAMAGUCHI S; FUJITA H; SUGATA K; TAIRA T; IINO T
CS DEP. BIOL., SCH. EDUC., WASEDA UNIV., NISHIWASEDA, TOKYO 160, JPN.
SO J GEN MICROBIOL, (1984) 130 (2), 255-266.
CODEN: JGMIAN. ISSN: 0022-1287.
FS BA; OLD
LA English

L4 ANSWER 172 OF 177 MEDLINE

AB Phase variation, the alternation of expression of flagellar antigens H1 and H2, in **Salmonella** typhimurium is mediated by site specific inversion of a 995 bp DNA segment of the chromosome. Hin, a protein encoded within the 995 bp segment, is thought to catalyze the recombination reaction between 14 bp inverted repeats flanking the 995 bp segment. By comparison of the relative rates of inversion of two different plasmids containing the H2 inversion segment flanked by different sequences, we conclude that the sequences adjacent to the inversion segment affect the rate of inversion. Homologous pairing of the repeats is important in H2 inversion since the orientation of the repeats on the host molecule(s) determines the result of the recombination reaction. The presence of the hin gene mediates the fusion of two plasmids when each contains one of the 14 bp repeat sequences. When the 14 bp sequences are direct repeats on a single molecule the sequence between them is **deleted**. These results support the hypothesis that the H2 inversion system functions by homologous, conservative, site specific recombination which is similar to the systems found associated with TnA transposons and temperate bacteriophage.

AN 83114621 MEDLINE

DN 83114621 PubMed ID: 6759874

TI Genetic analysis of the mechanism of the **Salmonella** phase variation site specific recombination system.

AU Scott T N; Simon M I

NC GM07240 (NIGMS)

SO MOLECULAR AND GENERAL GENETICS, (1982) 188 (2) 313-21.
Journal code: 0125036. ISSN: 0026-8925.

CY GERMANY, WEST: Germany, Federal Republic of

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 198303

ED Entered STN: 19900318
Last Updated on STN: 19970203
Entered Medline: 19830311

L4 ANSWER 173 OF 177 CAPLUS COPYRIGHT 2003 ACS

AB Two functions necessary for recombinational gene switching in the phase variation system of **Salmonella** were identified: a trans-acting function encoded by the hin gene (H inversion) located within the inversion region, and a cis-acting function consisting of a 14-base-pair sequence flanking the inversion region in the inverted repeat configuration. A homologous recombination event between the 14-base-pair inverted repeat sequences resulted in inversion of the intervening DNA segment; **deletion** of either of the sequences prevented operon H2 switching. A protein of mol. wt. 19,000, encoded by recombinant plasmids contg. the hin gene, was correlated with hin activity; the size of the protein was consistent with the amino acid-coding capacity of the open translation frame of the hin region. The hin-mediated inversion of the operon H2 control element was independent of RecA function, but .lambda.H2 Hin- mutants showed a low frequency of H2 switching when the RecA recombination system was functional. The nucleotide sequence of the inversion region is presented, as well as predicted amino acid sequences for the hin and H2 structural genes.

AN 1982:98640 CAPLUS

DN 96:98640

TI Analysis of the functional components of the phase variation system

AU Silverman, M.; Zieg, J.; Mandel, G.; Simon, Melvin

CS Dep. Biol., Univ. California, La Jolla, CA, 92093, USA

SO Cold Spring Harbor Symposia on Quantitative Biology (1981), 45(1, Movable Genet. Elem.), 17-26
CODEN: CSHSAZ; ISSN: 0091-7451

DT Journal

LA English

L4 ANSWER 174 OF 177 MEDLINE
AN 80199912 MEDLINE
DN 80199912 PubMed ID: 6247071
TI Phase variation: genetic analysis of switching mutants.
AU Silverman M; Simon M
SO CELL, (1980 Apr) 19 (4) 845-54.
Journal code: 0413066. ISSN: 0092-8674.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198008
ED Entered STN: 19900315
Last Updated on STN: 19990129
Entered Medline: 19800815

L4 ANSWER 175 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Spleen cells from adult mice rendered tolerant to the fluorescein (FL) hapten (as FL-sheep .gamma.-globulin) were analyzed at limiting dilution for the numbers of precursors stimulatable by specific antigen (FL-polymerized **flagellin** [**Salmonella** adelaide]; FL-POL) or by a polyclonal B[bone marrow-derived]-cell activator (Escherichia coli lipopolysaccharide; LPS). The number of PFC precursors activated by FL-POL was reduced more than 4-fold in the spleens of FL-tolerant mice compared to normal controls. LPS triggered equivalent numbers of FL-specific PFC [plaque-forming cell] precursors in normal and tolerant spleens. The clones stimulated by LPS were predominantly the low-avidity precursors in FL-tolerant spleens as shown by plaque inhibition studies. After FL-gelatin enrichment of normal or tolerant spleen cells, which contain equal numbers of antigen-binding cells, purified cells from tolerant mice were reduced in the numbers of clonable precursors upon LPS stimulation. Two other B-cell mitogens, POL and PPD [purified protein derivative], failed to activate PFC precursors from FL-gelatin-purified tolerant spleen cells. Some high-avidity clones may be functionally **deleted** even in adult B-cell tolerance as previously noted for neonatal tolerance.
AN 1980:155339 BIOSIS
DN BA69:30335
TI CELLULAR EVENTS IN TOLERANCE 7. DECREASE IN TOLERANT SPLEENS OF PLAQUE FORMING CELL PRECURSORS STIMULATED IN-VITRO BY SPECIFIC ANTIGEN OR MITOGEN.
AU VENKATARAMAN M; SCOTT D W
CS DIV. IMMUNOL., DEP. MICROBIOL. IMMUNOL., DUKE UNIV. MED. CENT., DURHAM, N.C. 27710, USA.
SO CELL IMMUNOL, (1979) 47 (2), 323-331.
CODEN: CLIMB8. ISSN: 0008-8749.
FS BA; OLD
LA English

L4 ANSWER 176 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 35
AB A site-specific inversion event is responsible for phase transition in **Salmonella**, as indicated by heteroduplex analysis of recombinant molecules carrying the gene coding for H2 **flagellin** in **Salmonella**. The inversion region corresponds to approximately 800 base pairs in length, and the inversion process does not appear to be dependent upon the Escherichia coli RecA recombination pathway. Specific **deletion** derivatives of the cloned fragments no longer produce H2-specific flagella, effectively mapping the H2 gene within about 300 bp of the inversion region. Recombinant products of the hybrid molecules arose spontaneously, and they were used in the mapping of restriction sites within the inversion region. The restriction maps further

demonstrate the extent and nature of the inversion.

AN 1979:141887 BIOSIS
DN BA67:21887
TI REGULATION OF GENE EXPRESSION BY SITE SPECIFIC INVERSION.
AU ZIEG J; HILMEN M; SIMON M
CS DEP. BIOL., UNIV. CALIF. SAN DIEGO, LA JOLLA, CALIF. 92093, USA.
SO CELL, (1978) 15 (1), 237-244.
CODEN: CELLB5. ISSN: 0092-8674.
FS BA; OLD
LA English

L4 ANSWER 177 OF 177 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 36
AB For the mapping of H1, the structural gene for phase-1 **flagellin** in **Salmonella**, spontaneous non-flagellate H1 mutants were isolated from a phase-1 stable derivative, SJ925 H1-g1,g2,g3,t, of S. abortusequi. Mapping was carried out with the **deletion** mutants among them by P22 phage-mediated transduction. Mutants of flaAI and flaL, adjoining opposite sides of H1, were also included in the mapping. As the result, H1 was divided into 16 segments by 15 **deletions**. Mapping by recombination frequencies was then carried out using representative H1 mutants. Comparison of the 2 maps showed that 14 consecutive segments near flaL covered about 70% of the non-flagellate H1 mutational sites, although they were confined to a quarter of H1 in the recombination map. The other 2 segments occupied the remaining 3 quarters of H1. By use of the **deletion** map, the sites of 3 phase-1 curly and 3 ah1- mutations were determined. The curly mutational sites were mapped in the segment second from the flaAI side and the ah1- mutational sites in the segments near the flaL side. To ascertain approximate positions of the areas determining the phase-1 antigen specificities, their arrangement relative to a curly mutational site, curly-2, and H1-linked fla genes was examined by 3-point crosses. From the results, all the antigenic specificity-determining areas examined were located between flaAI and curly-2 in the following order: flaAI-g2-g1-g4-(g3,g5,f,m,t)-curly-2-flaL.

AN 1976:171932 BIOSIS
DN BA62:1932
TI GENETIC ANALYSIS OF H-1 THE STRUCTURAL GENE FOR PHASE 1 **FLAGELLIN** IN **SALMONELLA**.
AU HORIGUCHI T; YAMAGUCHI S; YAO K; TAIRA T; IINO T
SO J GEN MICROBIOL, (1975 (RECD 1976)) 91 (1), 139-149.
CODEN: JGMIAN. ISSN: 0022-1287.
FS BA; OLD
LA Unavailable

=>

6 ANSWER 88 OF 91 MEDLINE

AB Plasmid pLS408 includes gene fliC(d) specifying **Salmonella flagellin** of antigenic type d with an in vitro **deletion** of a 48 base-pair EcoRV fragment in its central hypervariable antigenically-determinant region IV. Oligonucleotides specifying peptide epitopes of antigens of unrelated pathogens inserted, in correct orientation, at the unique EcoRV site of pLS408 specify chimeric **flagellins** and, in many instances, cause production of functional flagella when the plasmid is placed in a **flagellin**-deficient delta aroA live-vaccine strain of **Salmonella** dublin. The foreign epitope is then exposed at the surface of the flagellar filaments, as shown by the immobilizing effect of anti-epitope antibody and by immunogold electron-microscopy. The live-vaccine strain with a foreign epitope at the surface of its flagella when administered to mice by **injection** nearly always causes production of antibody with affinity for the foreign epitope and, sometimes, also for the source protein. Repeated **injection** of the live vaccine with an epitope of Streptococcus pyogenes type 5 M protein as insert caused production of opsonizing antibody and conferred partial protection against Streptococcus challenge. **Injection** of semi-purified chimeric flagella or **flagellin**, alone or with adjuvant, likewise causes antibody production, in one instance sufficient to give partial protection against influenza A virus challenge. Plasmid pLS408 with some inserts does not confer motility, either because the filaments produced are non-functional or because **flagellin** is made but not assembled or because little or no **flagellin** is produced. The features of a sequence which as insert determine production or non-production of functional flagella are not known. The effect of insertion of known T-cell epitopes and cellular immune responses to epitope inserts in **flagellin** are as yet little explored.

AN 94321840 MEDLINE

DN 94321840 PubMed ID: 7519231

TI Immune responses to epitopes inserted in **Salmonella flagellin**.

AU Stocker B A; Newton S M

CS Department of Microbiology and Immunology, Stanford University School of Medicine, CA 94305-5402.

SO INTERNATIONAL REVIEWS OF IMMUNOLOGY, (1994) 11 (2) 167-78. Ref: 24
Journal code: 8712260. ISSN: 0883-0185.

CY Switzerland

DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199408

ED Entered STN: 19940909
Last Updated on STN: 19960129
Entered Medline: 19940830